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ABSTRACT

The study on Lake County career opportunities was conducted (1) to forecast major population and demographic changes and their effects on schools and programs, (2) to determine the present and future occupational needs of employers, (3) to determine current program and enrollments in career training, (4) to determine student aspirations, (5) to determine career planning services provided for the students, and (6) to make recommendations for improvement of occupational education. To meet these objectives, four subcommittees from the Citizens Advisory Committee were established to collect pertinent data. The findings for each objective are discussed with supporting tables and include: (1) 1974 population estimates range from 202,600-220,900 with a declining birth rate; (2) most companies do not forecast rapidly expanding labor needs, and higher job categories were in more demand; (3) college preparatory was the program with the highest enrollment; (4) nearly half of all seniors had college plans; career cluster selection varied with the sex of the respondent; (5) research on both local and national levels suggests student concern for career planning and information; (6) six recommendations resulted. Questionnaires used for the study and a bibliography are appended. (Author/EC)

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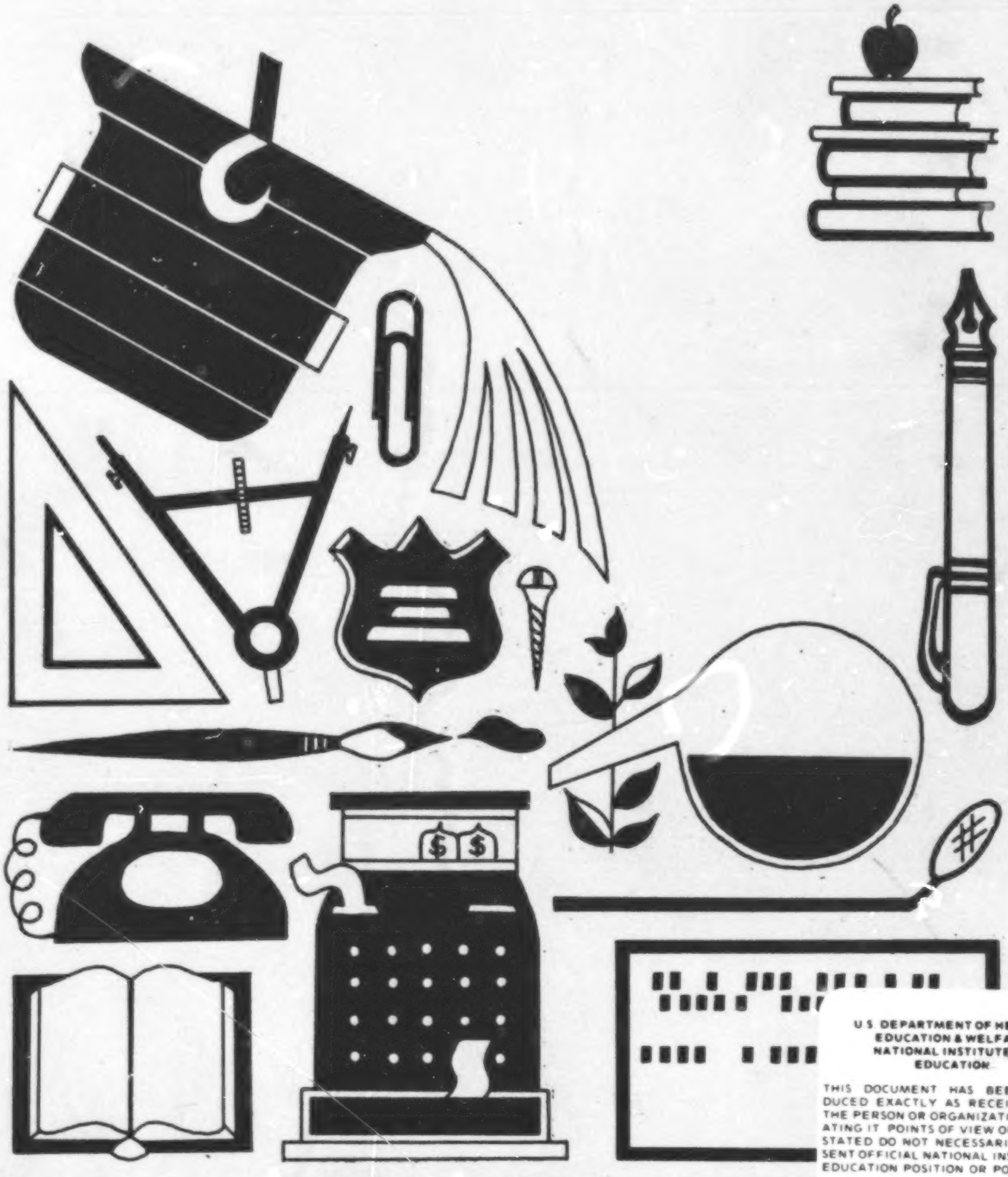

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2

THE LAKE COUNTY CAREER OPPORTUNITIES STUDY II

A

COOPERATIVE STUDY

PRESENTED TO

THE LAKE COUNTY ASSOCIATION OF SCHOOL ADMINISTRATORS

AND

LAKELAND COMMUNITY COLLEGE

PREPARED AS A COMMUNITY SERVICE PROJECT

TIMOTHY W. WRIGHT

PROJECT COORDINATOR

THIS SERVED AS A PRACTICUM PROJECT FOR
THE ED.D. PROGRAM AT NOVA UNIVERSITY,
FORT LAUDERDALE, FLORIDA

LAKELAND COMMUNITY COLLEGE
MENTOR, OHIO 44060
JANUARY 3, 1975

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ERRATA

PAGE	
7	Second paragraph, change XIII to VIII.
8	Third line, change Explorer to Exploring.
25	Second paragraph. Reverse "to all the."
44	First line. Omit the comma after survey.
44	Second paragraph, fifth line. Change to representation.
44	Last paragraph, second, line--change to each.
59	Last line change to Lake County YMCA.
60	Last paragraph, third line, change to affiliations.
72	Second paragraph, omit the second sentence.
77	Fourth line. Omit "is a list of all" and insert are.
103	Second line, change to Exploring.
124	Second paragraph--change to Exploring.
133	First paragraph, eight line, change in to from.
135	Fifth paragraph, omit the last sentence.
138	Second line, second sentence. Omit comes, insert came.
176	Second paragraph, change to Dictionary.

FORWARD

Today, career-related information is important to students, parents, and educators. All three groups seek to help young people make the transition from school to a career with as little conflict as possible. After all, a career is a major aspect of adult life and much of our educational effort is intended in whole or in part to contribute to a student's career. It is in this spirit that in the Spring of 1974, the Lake County Career Opportunities Study II was initiated as a community service project by Lakeland Community College in cooperation with the Lake County Association of School Administrators.

Much of the information contained in these nine chapters has never been collected on a county-wide basis; some was extracted from secondary sources. Of particular interest is the data about students. This information should tell us many things about the students of Lake County and can be used as a reference by anyone concerned with career-related counseling and education. Chapter IX of this report contains specific recommendations for change made by the Citizens Advisory Committee.

Many outstanding people worked together to produce this report, and we hope it will eventually help the young people it was intended to serve.

Sincerely,

Timothy W. Wright

Timothy W. Wright
Project Coordinator

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Each of the following persons was selected by the superintendent of schools of his/her community to represent the school district on the project. These are leaders of business, industry, public services, and the professions whose advice and efforts lend to the credibility of this report. In effect, they planned and executed the project. We are rich indeed to have worked with these talented people.

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During the project there were many individuals, not part of the Citizens Advisory Committee, who gave freely of their advice and help. To these friends we are indebted. The task would have been considerably more difficult had they not been involved.

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Several of our Lakeland colleagues served as readers and critics of writing style and content. Red ink flowed mercilessly. For their help we are thankful, but of course, we remain accountable for the contents of this report.

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Eugene Dent	Leonard Slominski
Raymond Fortune	Carlos Tackett
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Timothy W. Wright
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Chapter I INTRODUCTION

CHAPTER HIGHLIGHTS

*The rationale for this study comes primarily from two sources - the recommendations of the first Lake County Career Opportunities Study in 1969 and The Lake County Association of School Administrators.

*A Citizens Advisory Committee comprised of more than thirty lay persons was broken into four sub-committees to collect the various data. These lay people were recommended by the various superintendents.

*The principal limitation of this report is that career projections were made at a pivotal point in the economy--before the recession became salient. Most of the research was done in the spring and summer of 1974.

BACKGROUND AND ORGANIZATION OF THE STUDY

During the 1969-70 school year, The Lake County Association of School Administrators in conjunction with Lakeland Community College co-sponsored the first Lake County Career Opportunities Study. The first Study brought together representatives from business, industry, public service, and the professions. It had these broad goals:

> (1) To determine the present and future occupational needs of Lake County employers, (2) To determine the career goals and educational needs of the population, (3) To bring together the resources of education, business, industry, labor, public service, agriculture and the professions to meet these needs, and (4) To examine the scope and adequacy of existing and planned programs in vocational and technical education in secondary and post-secondary schools of Lake County.

The results of the first Study were distributed during the 1970-71 school year.

The first recommendation of the 1969 Study was to conduct a similar study by 1975 to up-date the original.

> "We recommend that another comprehensive study of this type be taken in 1975, to further ascertain aspirations, employment opportunities, course availability, and, most importantly, evaluation of current programs in secondary and post-secondary institutions."[1]

On January 25, 1974, Dr. Wayne Rodehorst, President of Lakeland Community College, hosted a meeting of all county superintendents (the new Executive Committee for the Study) to reach an agreement on whether a second Lake County Career Opportunities Study should be undertaken.

---

[1] Lake County Career Opportunities Study, Lakeland Community College, 1970, p. 81.

The results were favorable. Subsequently, Timothy W. Wright, Lakeland Community College Associate Professor, was selected as Project Coordinator.

To insure communication from all segments of Lake County, a Citizens Advisory Committee was needed. Each superintendent was asked to appoint four or five persons from his community. These appointees were to represent a cross section of groups in the community, including business, industry, public service, and the professions. Each appointee was asked to attend an organizational meeting of the Citizens Advisory Committee on March 25, 1974, at Lakeland Community College. The objectives of the project were reviewed with the group. For purposes of expediency sub-committees were established to gather specific kinds of data relative to the objectives of the project. The sub-committees and their functions are presented below.

Sub-Committee One

Population Characteristics and School Enrollments

The current status and future projections of population and school enrollment data were obtained through a questionnaire to school systems as well as a search of United States Census and related data. The results are presented in Chapter II.

Sub-Committee Two

Labor Market Needs

Sub-committee members personally interviewed a representative sample of business and industrial employers. The determination of employment opportunities and educational needs were two important goals. The results of their efforts are presented in Chapter III.

Sub-Committee Three

Existing Programs and Facilities

A questionnaire was sent to all superintendents to determine existing career preparation programs and courses as well as related data. A second questionnarie was sent to all adult education directors. The data collected are presented in Chapter IV.

Sub-Committee Four

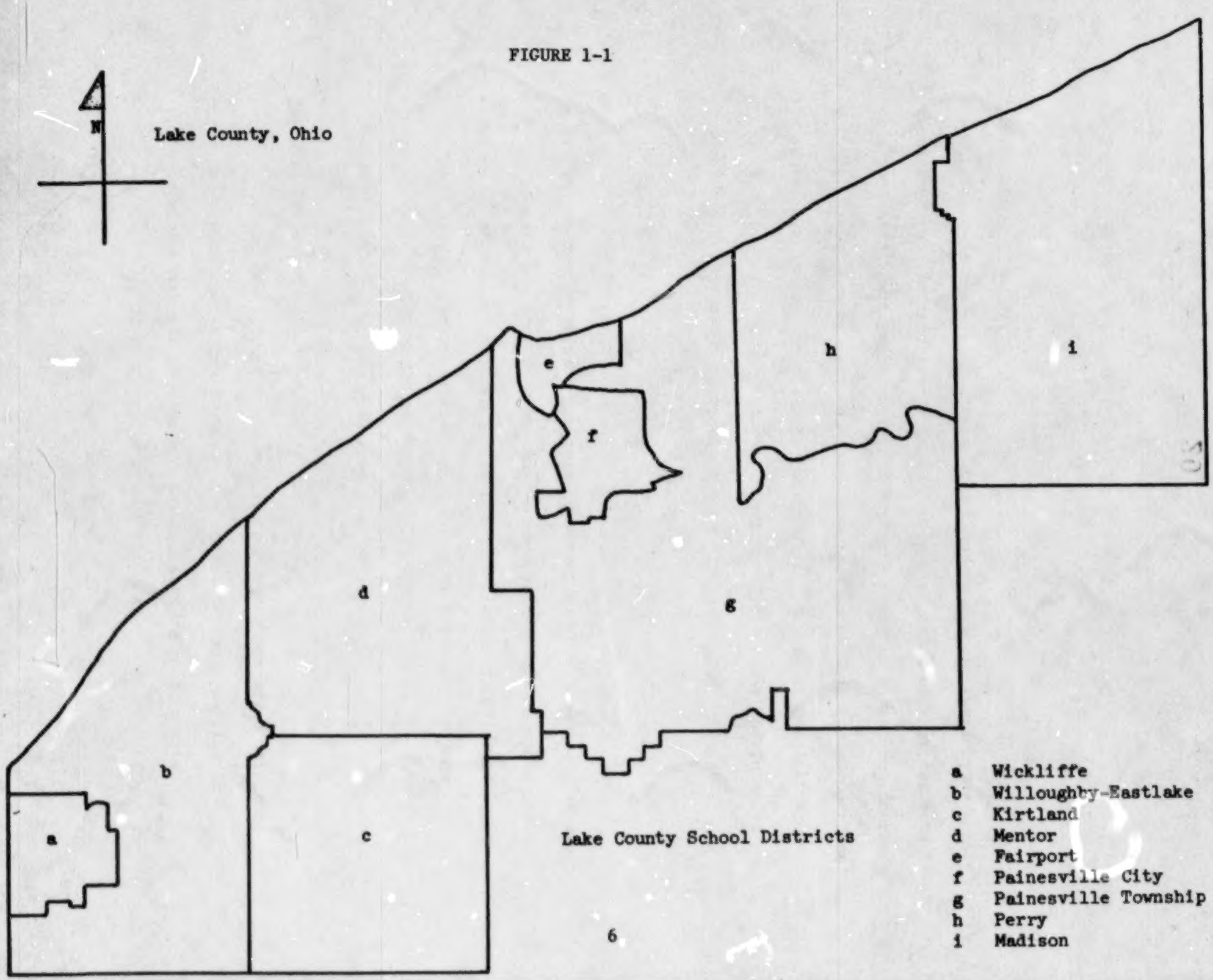
Career Aspirations of Students

Two questionnaires were given to a total of 6,756 high school students to determine their attitudes toward career planning. Secondly, a questionnaire was sent to high school counselors inquiring about their career guidance activities. The data collected by this sub-committee are reviewed in Chapters V and VII.

Area of the Study

Certain geographical limitations were placed on this study to facilitate its self-imposed completion date: only schools, businesses, and industries in Lake County were included in the survey. However, since many Lake County residents do and will continue to work in nearby counties, certain figures and recommendations concerning "greater Cleveland" seemed appropriate and are included. The map on the following page illustrates the geographical boundaries of the county and identifies the various public school districts.

FIGURE 1-1



Lake County School Districts

OBJECTIVES OF THE STUDY

The Lake County Career Opportunities Study II sought to achieve some general objectives. The efforts of each sub-committee were supportive of these objectives:

1. To forecast major population and demographic changes as they might affect schools and programs.
2. To determine the present and future occupational needs of Lake County and area employers.
3. To determine current programs and enrollments in career training in Lake County.
4. To determine career aspirations of Lake County students.
5. To determine career planning services provided for the students in Lake County.
6. To make recommendations for improvement of occupational education in Lake County.

The data to support Objective One of the Lake County Career Opportunities Study II can be found in Chapter II. Demographic Characteristics and Population Projections. The information to support Objective Two can be found in Chapters III and XIII. The Labor Market Needs Survey, reviewed in Chapter III, is supported with a review of the secondary sources on career trends in Chapter XIII. The need to determine current programs and enrollments in career training, Objective Three, is the subject of Chapter IV.

Objective Four requires a determination of the career aspirations of Lake County students. Two chapters in this survey give supporting data for this goal. Chapter V, Career Aspirations of Lake County Students, presents a massive survey completed by Sub-Committee Four, covering 44 percent of Lake County's 9-10-11-12 grade students. In addition to this, a second major research survey is reported in Chapter VI, the Explorer Survey on Student Career Interests. This survey contacted nearly 10,000 students asking for similar types of data.

Objective Five mandates a determination of the career-planning services offered the students in Lake County. This is essentially the subject of Chapter VII on Career Counseling. Attitudes of students, as well as counselors, toward career planning are presented in that chapter.

The recommendations for improvement of occupational education in Lake County required by Objective Six are reviewed in Chapter IX, Recommendations of the Citizens Advisory Committee.

LIMITATIONS

The principal limitation of this study rests with the uncertainty of making career projections in recessionary periods. In this study, some employers were unable to give meaningful forecasts because of the state of our economy. Most of the secondary sources quoted were written prior to the widespread publicity given to our "official" recession (Fall 1974) and the slump in the automobile industry, the latter being of particular interest in greater Cleveland, because this area is the second largest producer of automobile parts in the United States. Also the student surveys were conducted in Spring 1974, well in advance of the definite downturn in the economy. Would student reactions to questions change if the survey were conducted again?

A second limitation is that this study did not contact the adult community concerning its needs. One of the well-known trends in education is that adults are re-entering education for job up-grading or self-fulfillment.

The success of Lakeland Community College and Cuyahoga Community College with evening classes, both credit and non-credit, is testimony to this large area of potential service.

Other limitations of the several specific research projects undertaken in this study are presented in the appropriate chapters.

DEFINITION OF TERMS

Although they may not enjoy universal agreement, the terms used with critical frequency in this report were defined as follows for the purpose of the study.

Adult (Continuing) Education

"Continuing education is not confined to schools, colleges, and other 'educational institutions,' nor is it confined to courses and classes. Its sponsors include employers, churches, unions, military service schools, correspondence schools, community agencies, and a wide variety of professional, proprietary, and voluntary institutions. It assumes such varied forms as courses taken for credit, informal instruction on the job, intensive study without either teacher or classroom, private tutoring, correspondence study, instruction by social workers or public health nurses, and discussion groups or demonstrations in home, shop, field, or office."[2]

Apprentice Programs[3]

An organized system for providing the manipulative skills and technical or theoretical knowledge needed for competent performance in skilled occupations. Usually involves cooperation among school, labor, and management, since apprentices learn the skills of the craftsman through on-the-job work experiences and the related information in the classroom, most commonly in cooperation with the public school's vocational program. Minimum terms and conditions of apprenticeship are regulated by state and local statutes or agreements.

---

[2] Nathan C. Shaw, Ed., Administration of Continuing Education, National Association for Adult Education, Washington, D.C., 1969.

[3] Definitions taken from the Laymen's Glossary of Vocational Education Terms. The Manpower Planning & Development Commission, The welfare Federation of Cleveland, Cleveland, Ohio 44115.

Career Cluster

A career cluster must have at least one major function in common and all careers can be grouped into one of the career clusters. A good example is the ten clusters suggested by the Educational Research Council of America.[4] The ten clusters are: building construction and maintenance, business and commerce, communications, extractive industries, health and personal services, marine industry, mechanics and metal working, protective service, special technologies, and textiles and leather.

Career Education

A comprehensive educational program designed to provide students with the necessary information and developmental experiences to prepare them for living and working in society. It combines the efforts of home, school and community and reaches from preschool through adulthood.

Career Programs

For the purpose of this study the term career program refers to courses within the areas of vocational education; industrial arts courses such as drafting, metals, graphic arts, etc.; commercial or business education; home economics education; and technical education.

---

[4] Louis A. McElroy, Ten-Cluster Classification of Occupations, Educational Research Council of America, Cleveland. October, 1972.

College Preparatory Program

For the purpose of this study the college preparatory program includes those courses whose intent is to prepare students for entry into college. It includes all students who formally or informally have indicated they are following a program that will prepare them for college.

Commercial or Business Program

For the purpose of this study the commercial or business program includes those courses whose intent is to explore and in some cases prepare students for business-oriented careers. It has been assumed that if a student indicated he is following a commercial or business program, a number of courses will be or have been taken in that area.

Cooperative Occupational Education

Cooperative Occupational Education is an educational program in which students have employment while attending school. It is not to be confused with "work experience" programs. In cooperative education, the student is hired as a "learning worker." The program has as its primary goal the development of occupational competency. The program places a trainee in a job commensurate with his ability and his career objectives and provides classroom activities directly related to job activities and the trainee's occupational goal. These programs normally provide the trainee with a variety of job experiences often involving job rotation.[5] Some examples of cooperative occupational education in Lake County would be programs in distributive education, cooperative office education, and diversified cooperative training. Lakeland Community College offers two such programs, retailing and business management.

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[5] Ralph E. Mason and Peter G. Haines, Cooperative Occupational Education, The Interstate Printers and Publishers, Inc. 1965. p. 58.

Exploring

Exploring is a program of life experiences for young adults under the guidance of business, professions, associations, trades, and institutional sponsorships.

Exploring was developed by the national Exploring Division, Boy Scouts of America, for young people between the ages of 14 and 21. Exploring is organized and serviced by local Exploring divisions in Scout councils throughout the nation.

Exploring brings young men and women voluntarily into association with adults who, by the example of their character, citizenship traits, and knowledge, provide a positive force in the lives of young adults.

Exploring helps young people find their present and future roles as individuals in society, through organizational and program methods related to their needs. It provides youth with self-motivated and self-conducted activities that involve them in social, vocational, outdoor, citizenship, personal fitness, and service experiences both flexible and relevant to their immediate interests.

General Program

For the purpose of this study the general program includes all other programs students are following that cannot be classified as college preparatory, vocational, industrial arts, commercial or business, or the home economics areas.

Home Economics Education

An educational program of instruction planned to assist individuals to understand and solve problems in home and living. Subject matter areas include: child development; family relationships; food and nutrition;

clothing and textiles; family economics and home management; housing, home furnishings and equipment; and family health. (Students who identified themselves as being in home economics rather than in vocational programs were, for the purposes of this study, put in the general curriculum.)

Industrial Arts Education

This educational program is one of the practical arts offering instructional shopwork of a non-vocational type which provides general educational experinces centered around the industrial and technical aspects of life today and offers orientation in the areas of appreciation, production, consumption, and receation through actual experiences with materials and goods. This program also promotes as exploratory experiences helpful in the choice of vocation. Since this is considered general education experience and not "vocational education," it is not eligible for vocational education funds. (Generally marked by the devotion of a smaller block of time than is allocated "vocational education" programs.)

Occupational Education

This is a generic term usually applied to the broad range of educational experiences which relate to preparing for a career. It includes, but is not confined to, development of manual skills, and exists at all educational levels. It perceives vocational education not as a separate discipline, but as part of an occupational education experience in which vocational and academic training are integrated by means of both verbal and non-verbal experiences relating learning to reality.

Occupational emphasis at the elementary school level is oriented toward teaching respect for work and encouraging children to want to do some type of work. At the junior high level the occupational emphasis is on providing to all students an orientation to the world of work through exploratory programs and experiences to assist them in making an occupational choice. Vocational education, with reference to the development and acquisition of skills and knowledge in relation to semi-skilled, skilled, technician and para-professional occupations, is provided at the point in the student's education when a reasonable occupational choice has been made and the individual is motivated to prepare for employment.

New federal legislation puts Occupational Education into the post secondary area.

Performing Arts Education

A program of instruction planned to provide opportunities to discover, explore, develop, and evaluate talent and skills in art, music and dramatics. Subject areas should include art (watercolor, oils, textile design, etc), music (band, orchestra, vocal and theory), and dramatics. Dramatics would include auxilliary skills such as lighting, costume design, set design and photography.

Programs

A program is defined for our purposes as a series of individual courses leading to an educational outcome.

Reimbursable Vocational Education Programs

This type of training is conducted by a public school or teacher training institution under contact and in accordance with the State Plan for Vocational Education approved by the U. S. Office of Education. It meets state standards of staff and time allotment, as well as standards for equipment and facilities in the case of area vocational schools. It is eligible to receive funds from the state (from state and federal vocational education appropriations.)

Typical high school vocational education programs approved in Ohio are vocational agriculture, business and office education, distributive education, vocational home economics, and trade and industrial education. According to Ohio standards, participation in these programs is usually restricted to the last two years of the student's educational program. Such programs are denoted as "reimbursable vocational education programs."

SMSA

The abbreviation for Standard Metropolitan Statistical Area. An SMSA is an integrated, economic and social unit containing one city of 50,000 inhabitants or twin cities with a combined population of at least 50,000. For the purposes of this study, the Cleveland SMSA was used including Cuyahoga, Lake, Medina, and Geauga Counties.

Technical Education

For the purposes of this study, Technical Education means post-secondary career programs of two years duration. In Ohio, these programs and courses are offered in community colleges, technical colleges, some university branches, and the community and technical schools of several state universities.

Vocational Education

That part of an educational experience which has a primary purpose of equipping persons for useful employment in semi-skilled, technical and para-professional occupations. Programs are designed to serve the needs of two distinct groups: first, youth and adults who are preparing to enter occupations in the areas noted above, and second, adults who have entered upon employment and desire upgrading or retraining.

However in Ohio, vocational programs are offered only at the high school level. Technical education for para-professionals is offered in two-year community colleges, technical institutes, and university branches.

Vocational education provides not only the technical knowledge and work skills necessary for employment, but also develops abilities, attitudes, work habits and appreciations which contribute to a satisfying and productive life. Its contribution is the blending of theoretical knowledge with the practical experiences and requirements of entry jobs, recognizing the nature of the world of work. This could be said of Technical Education as well.

In a general sense, vocational programs may be classified into two categories:

1. Vocational education programs that are reimbursable from state and/or federal vocational education funds.
2. Vocational education programs that are not reimbursable from state and/or federal vocational education funds.

Chapter II DEMOGRAPHIC CHARACTERISTICS AND POPULATION PROJECTIONS

CHAPTER HIGHLIGHTS

*This chapter reviews some of the basic demographic characteristics and population projections of Lake County.

*The various 1974 population estimates for Lake County range from 202,600 to 220,900.

*In the opinion of county educators, the declining birth rate will have an impact on the schools.

*Lake County growth and life are closely linked with Cuyahoga County. Greater Cleveland has some impressive business and industrial characteristics.

The descriptive data that follows has been taken from a number of sources. Sub-Committee One, Population Characteristics, is responsible for most of the material presented herein. The two-man Sub-Committee consisted of Kenneth Kriegmont and Edward Zasadzinski, both of the Lake County Joint Vocational School.

DEMOGRAPHIC CHARACTERISTICS OF LAKE COUNTY

Lake County is located just east of Cuyahoga County (Cleveland) along Lake Erie in Northeastern Ohio. It is generally linked to Cuyahoga County economically and has been affected by the greater Cleveland suburban growth. Although Lake County is the smallest county in Ohio in terms of square miles, it is the fourteenth most populated county in the state.[1] Various county population estimates for 1974 ranged from 202,600[2] to 220,900[3] persons. Lake, with approximately 60,700 households, is the seventeenth youngest county in Ohio with a median population age of 26.7 years.[4] The percentage of population in the various age groups is 6.3% 25 years or under, 24.9% 25-34 years, 21.9% 35-44 years, 21.6% 45-54 years, 14.3% 55-64 years, and 11% 65 years and older.

According to one source, Lake County residents have the highest median and mean disposable income (after taxes) per household, $15,973, in Ohio. The percent of households in various income groups is as follows: 5.7% under $2,999; 3.3% $3,000-$4,999; 11.8% $5,000-$7,999; 15.3% $8,000-9,999: 31.3% $10,000-$14,999; 22.6% $15,000-$24,999, and 10% above $25,000.[5]

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[1] "1974 Survey of Buying Power," Sales Management, July 8, 1974, p. C-109.

[2] Ibid, p. C-109.

[3] "Population By Communities, Cleveland Northeast Ohio," prepared by the Marketing Research Section, Marketing Services Department, The Cleveland Electric Illuminating Company, 1972.

[4] 1974 Survey, op. cit., p. C-109.

[5] 1974 Survey, op. cit., p. C-109.

POPULATION PROJECTIONS

Because current census data is not available, population figures for 1974 are estimates. Planning for the various school systems is heavily contingent on the factors of population growth and birth rate per thousand, and Lake County is expected to make considerable gains in population in the years ahead. One source estimates that "Lake County population is expected to grow by almost a half million people by the year 2020."[6]

Since forecasts of population change vary with each agency making projections, it makes good sense to present several such projections so comparisons can be made. To that end, we have included four forecasts of county population growth. These can serve as a data base and an aid to local planning, for in all probability the actual population will be somewhere between these estimates. Obviously, all projections are based on certain assumptions. Therefore, those who seek precise information should review the original sources. The projections are presented in alphabetical order in Figure 2-1 (a) and 2-1 (b), Batteile Memorial Institute; Figure 2-2, Cleveland Electric Illuminating Company; Figure 2-3, Lakeland Community College; and Figure 2-4, Lake County Planning Commission.

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[6] Northeast Ohio Economic and Demographic Projections 1970-2020, Battelle Memorial Institute, Columbus Laboratories, Columbus, Ohio, November 12, 1970, p. 75.

FIGURE 2-1 (a)
Lake County Population Projections - Battelle Memorial Institute

	Population						
Community	1960	1970	1980	1990	2000	2010	2020
Eastlake	12,467	19,711	29,626	41,837	53,640	63,930	70,554
Fairport Harbor	4,267	3,663	3,719	4,130	4,615	5,105	5,419
Kirtland	4,709	5,532	7,206	9,480	11,732	13,738	15,029
Madison	1,347	1,676	2,256	3,021	3,773	4,439	4,867
Mentor	21,779	36,671	56,413	80,479	103,677	123,853	136,842
Mentor-on-the-Lake	3,290	6,516	10,555	15,384	20,014	24,022	26,602
Painesville	16,116	16,358	19,301	23,937	28,676	33,010	25,795
Painesville Northeast	1,267	1,826	2,642	3,666	4,661	5,533	6,094
Wickliffe	15,760	21,038	29,373	40,068	50,515	59,709	65,626
Willoughby	15,058	18,486	24,702	32,946	41,066	48,263	52,893
Willoughby Hills	4,241	5,249	7,046	9,420	11,756	13,824	15,155
Willowick	18,749	21,146	26,860	34,838	42,791	49,913	54,492
Noncommunity Balance	29,650	38,360	52,721	71,350	89,599	105,697	116,056
Lake County	148,700	196,232	272,420	370,556	466,517	551,037	605,424

Source: Northeast Ohio Economic and Demographic Projections 1970-2020, Battelle Memorial Institute, Columbus, Ohio, November 12, 1970, pages 67,70.

FIGURE 2-1 (b)
Projected Relative Share of Population

Community	1960	1970	1980	1990	2000	2010	2020
Eastlake	8.4	10.0	10.9	11.3	11.5	11.6	11.7
Fairport Harbor	2.9	1.9	1.4	1.1	1.0	0.9	0.9
Kirtland	3.2	2.8	2.7	2.6	2.5	2.5	2.5
Madison	0.9	0.9	0.8	0.8	0.8	0.8	0.8
Mentor	14.7	18.7	20.7	21.7	22.2	22.5	22.6
Mentor-on-the-Lake	2.2	3.3	3.9	4.2	4.3	4.4	4.4
Painesville	10.8	8.3	7.1	6.5	6.2	6.0	5.9
Painesville Northeast	0.9	0.9	1.0	1.0	1.0	1.0	1.0
Wickliffe	10.6	10.7	10.8	10.8	10.8	10.8	10.8
Willoughby	10.1	9.4	9.1	8.9	8.8	8.8	8.7
Willoughby Hills	2.9	2.7	2.6	2.5	2.5	2.5	2.5
Willowick	12.6	10.8	9.9	9.4	9.2	9.1	9.0
Noncommunity Balance	19.9	19.6	19.4	19.3	19.2	19.2	19.2

Source: Northeast Ohio Economic and Demographic Projections 1970-2020, Battelle Memorial Institute, Columbus, Ohio, November 12, 1970, pages 67,70.

FIGURE 2-2

Lake County Population Projections - Cleveland Electric Illuminating Company

Community	1971 Estimate	1975 Forecast	1980 Forecast	Percent Change 1970-80
Concord Twp.	6,130	7,510	9,510	59.9%
Eastlake	20,800	23,200	27,040	37.3
Fairport Village	3,650	3,530	3,510	- 4.2
Grand River Village	603	660	750	22.3
Kirtland Hills Village	449	490	550	21.7
Kirtland	5,610	6,300	7,260	31.3
Lakeline Village	223	240	250	12.1
Leroy Twp.	1,800	1,830	1,900	8.0
Madison Twp.	12,970	14,620	17,530	40.7
Madison Village	1,770	1,920	2,180	29.9
Mentor-on-the-Lake	7,120	8,170	9,640	47.9
Mentor	37,400	42,770	51,470	39.4
North Perry Village	896	970	1,100	29.3
Painesville *	16,580	17,010	17,530	6.0
Painesville Twp.	11,180	11,270	11,470	5.5
Perry Twp.	4,670	5,240	6,060	30.8
Perry Village	922	950	1,000	9.1
Timberlake Village	965	970	1,050	8.9
Waite Hill Village	527	570	680	32.3
Wickliffe	21,290	23,200	26,200	22.7
Willoughby	18,910	20,100	21,910	17.6
Willoughby Hills Village	6,370	7,730	9,520	81.4
Willowick	21,300	21,650	22,290	5.0
TOTAL LAKE COUNTY	202,135	220,900	250,400	27.0%

Source: Population by Communities, Cleveland-Northeast Ohio, The Market Research Section, Marketing Services Department, The Cleveland Electric Illuminating Company, 1972, page 12.

*Not in CEI service area

FIGURE 2-3

Lake County Population Projections - Lakeland Community College

Year	County Population
1970*	197,200
1971	201,940
1972	206,680
1973	211,420
1974	216,160
1975**	220,900
1976	226,800
1977	232,700
1978	238,600
1979	244,500
1980	250,400
1981	255,720
1982	261,040
1983	266,360
1984	271,680
1985	277,000

Source: "Population and Enrollment Projections for Internal Budgeting Purposes," Research Services Office, Lakeland Community College, revised 5/20/74.

*Official U. S. Census Figure

**Based on CEI population projections, 1972

FIGURE 2-4

Census and Projected Population by Political Subdivision - Lake County Planning Commission
(Preliminary Figures)

Community	1960*	1970*	1975*	1980*	1985*	1990*
Concord Township	3,860	5,948	8,500	11,000	13,250	17,000
Eastlake City	12,467	19,690	24,400	27,500	31,750	33,000
Fairport Village	4,267	3,665	3,700	3,900	4,015	4,130
Grand River Village	477	613	700	800	1,000	1,200
Kirtland City	4,709	5,530	6,500	8,000	8,750	10,000
Kirtland Hills Village	292	452	550	650	750	900
Lakeline Village	269	223	245	250	259	270
Leroy Township	1,502	1,759	2,000	2,500	2,700	3,000
Madison Township	8,494	12,455	14,750	16,500	16,725	21,000
Madison Village	1,347	1,678	2,000	2,400	2,750	3,100
Mentor City	21,652	36,912	44,000	52,000	56,000	60,000
Mentor-on-Lake City	3,290	6,517	8,000	9,500	10,250	11,000
North Perry Village	658	851	1,200	1,500	2,000	2,500
Painesville City	16,116	16,536	17,250	18,000	18,750	20,000
Painesville Township	10,286	10,870	14,000	17,800	21,000	24,650
Perry Township	3,291	4,634	5,500	7,000	9,000	12,500
Perry Village	885	917	975	1,100	2,000	2,500
Timberlake Village	670	964	980	1,000	1,080	1,100
Waite Hill Village	360	514	600	650	750	850
Wickliffe City	15,760	21,354	23,000	24,000	24,480	25,000
Willoughby City	15,058	18,634	21,700	25,000	27,735	29,000
Willoughby Hills City	4,241	5,247	7,000	8,000	9,320	10,500
Willowick City	18,749	21,237	22,500	24,000	24,400	25,000
Total	148,700	197,200	230,050	263,050	288,714	318,400

*Source: U.S. Census Lake County Planning Commission - 1972 Preliminary Figures

SCHOOL ENROLLMENT PROJECTIONS

One of the most widely discussed demographic trends in our society is the declining birth rate.[7] To educators, a continuing decline will almost certainly mean lower enrollments per thousand population, particularly at the elementary and secondary levels. Post-secondary institutions, as well, will undoubtedly have a decline in students of traditional college ages (18-23). However, there is a trend toward continuing education at the college level. More adults will become the "markets" of post-secondary schools, chiefly the community colleges. One source predicted that the average age of the community college student will rise from the current 27 years to 35 years by 1980.[8]

To assess opinions concerning student enrollment, a questionnaire was mailed to the all superintendents. Each school system was asked to report the total school enrollments for the 7-12 grades. They were then asked if projections in enrollments had been made through the 1978-79 school year. Resulting projected enrollments and their respective systems are the subject of Figure 2-5.

Projections seem to be consistent with the view that enrollments will decline. For example, in the Mentor, Wickliffe, and Willoughby-Eastlake systems there is a projected total decline in students. The decline is most severe in the 7-10 grades.

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[7] Vivien Lipscombe, "Drop in Elementary School Enrollment Due to Declining U.S. Birth Rate Reported by Census Bureau," U.S. Department of Commerce News, March 26, 1974. Henry H. Smith, "Decline in Birth Expectations by American Wives Continuing Census Survey Shows," U.S. Department of Commerce News, October 1974. "Manpower A.D. 2000," Occupational Outlook Quarterly, U.S. Department of Labor, Summer, 1973. pp. 17-19. "The Burgeoning Benefits of a Lower Birth Rate," Business Week, December 15, 1973. p. 41.

[8] Edmund Gleaser, President of the American Association of Community Junior Colleges. This was reported in an address at the Nova University Summer Institute Fort Lauderdale, Florida, July, 1974.

FIGURE 2-5

Current School Enrollments 7-12, Projections to 1978-79

Grade Level	Mentor	Painesville City	Perry	Wickliffe	Willoughby-Eastlake	Fairport	Madison
7	932	229	149	339	1,180	45	353
8	954	248	140	313	1,269	51	359
9	1,003	251	156	378	1,380	67	287
10	908	259	137	404	1,449	64	350
11	938	256	117	408	1,298	66	333
12	764	200	100	353	1,132	58	291
Total 1974 Students	5,499	1,443	799	2,221	7,708	353	1,973
All Students K-12	11,992	3,308	X	X	X	X	4,620

Projections 1978-79 School Year

Grade Level	Mentor	Painesville City	Perry	Wickliffe	Willoughby-Eastlake	Fairport	Madison
7	890	240	121	253	1,065	X	X
8	882	268	140	261	1,067	X	X
9	951	275	150	301	1,228	X	X
10	905	260	149	285	1,294	X	X
11	836	256	154	294	1,229	X	X
12	839	245	149	248	1,199	X	X
Total 1978-79 enrollment*	5,303	1,544	863	1,642	7,082	X	X
All Students K-12	11,453	3,450	X	X	X	X	X

X = Not available or projected, Spring 1974.
* = Projected figures.

Potential college enrollments are of concern to citizens as well as to area post-secondary institutions. One widely used source of enrollment data is Ronald B. Thompson's study.[9] This study was funded by a grant from the Ohio Board of Regents. The Lake County potential college attendance 1964-1989 is reported in Figure 2-6. Also reported are births 1942-1971, first grade attendance 1942-1977, and twelfth grade graduates 1960-1989. Please note that Thompson's college attendance projections do not include the over 23-year-old client for college education.

Thompson makes enrollment projections for Lakeland Community College through 1990 in Figure 2-7. His projections can be compared to the actual enrollment and projections made by the Research Services Office of Lakeland Community College in Figure 2-8.

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[9] Ronald B. Thompson, Projected Enrollments, Institutions of Higher Education, State of Ohio, The Ohio State University, June 1973.

FIGURE 2-6

Potential College Attendance for Lake County

LAKE COUNTY—PUBLIC AND PRIVATE SCHOOLS

Year	Births	Year	First Grade	% of Births	Year	12th Grade Graduates	% of 1st Grade
1942	1170	1948	1750	150	1960	1396	80
1943	1171	1949	1757	150	1961	1507	86
1944	1159	1950	1705	147	1962	1521	89
1945	1135	1951	1705	150	1963	1528	90
1946	1457	1952	2438	167	1964	2031	83
1947	1753	1953	2608	149	1965	2537	97
1948	1761	1954	2807	159	1966	2530	90
1949	1897	1955	2689	142	1967	2547	95
1950	1906	1956	2825	148	1968	2763	98
1951	2126	1957	3166	149	1969	2876	91
1952	2420	1958	3357	139	1970	3001	89
1953	2470	1959	*3619	147	1971	3154	87
1954	2740	1960	3822	139	1972	3283	86
1955	3073	1961	4097	133	1973	3482	85
1956	3455	1962	4200	122	1974	3570	85
1957	4028	1963	4644	115	1975	3947	85
1958	3832	1964	4650	121	1976	3953	85
1959	3905	1965	4529	116	1977	3850	85
1960	3845	1966	4545	118	1978	3863	85
1961	3905	1967	4727	121	1979	4018	85
1962	3696	1968	4572	124	1980	3886	85
1963	3813	1969	4335	114	1981	3685	85
1964	3818	1970	4068	107	1982	3458	85
1965	3636	1971	3982	110	1983	3385	85
1966	3644	1972	3614	99	1984	3072	85
1967	3448	1973	3620	105	1985	3077	85
1968	3496	1974	3671	105	1986	3120	85
1969	3562	1975	3740	105	1987	3179	85
1970	3739	1976	3926	105	1988	3337	85
1971	3521	1977	3697	105	1989	3142	85

* estimate

POTENTIAL COLLEGE ATTENDANCE—LAKE COUNTY

1st Year Out of H.S. Year	1st Year Out of H.S. Number	2nd Year Out of H.S. Number	2-Year Composite Total	3rd Year Out of H.S. Number	4th Year Out of H.S. Number	4-Year Composite Total
1964	2031	1528	3559	1521	1507	6587
1965	2537	2031	4568	1528	1521	7617
1966	2530	2537	5067	2031	1528	8626
1967	2547	2530	5077	2537	2031	9645
1968	2763	2547	5310	2530	2537	10377
1969	2876	2763	5639	2547	2530	10716
1970	3001	2876	5877	2763	2547	11187
1971	3154	3001	6155	2876	2763	11794
1972	3283	3154	6437	3001	2876	12314
1973	3482	3283	6765	3154	3001	12920
1974	3570	3482	7052	3283	3154	13489
1975	3947	3570	7517	3482	3283	14282
1976	3953	3947	7900	3570	3482	14952
1977	3850	3953	7803	3947	3570	15320
1978	3863	3850	7713	3953	3947	15613
1979	4018	3863	7881	3850	3953	15684
1980	3886	4018	7904	3863	3850	15617
1981	3685	3886	7571	4018	3863	15452
1982	3458	3685	7143	3886	4018	15047
1983	3385	3458	6843	3685	3886	14414
1984	3072	3385	6457	3458	3685	13600
1985	3077	3072	6149	3385	3458	12992
1986	3120	3077	6197	3072	3385	12654
1987	3179	3120	6299	3077	3072	12448
1988	3337	3179	6516	3120	3077	12713
1989	3142	3337	6479	3179	3120	12778

Source: Ronald B. Thompson, Projected Enrollments, Institutions of Higher Education, State of Ohio, The Ohio State University, June 1973.

FIGURE 2-7
Projection of Enrollment for Lakeland Community College

Based on first-grade enrollments from contributing counties 1952-72 and high school graduates from 1964 to 1972.

Year	(A) Potential College Students	Projected % of A Who Are Enrolled in College	Projected Number of Students Enrolled
1964-65			
1965-66			
1966-67			
1967-68	52443	2.0	1073
1968-69	52785	3.1	1626
1969-70	55145	3.6	1987
1970-71	58609	4.1	2400
1971-72	60377	5.5	3314
1972-73	60617	6.9	4199
1973-74	62817	7.5	4711
1974-75	65754	8.0	5260
1975-76	67250	8.5	5716
1976-77	67860	9.0	6107
1977-78	67649	9.5	6427
1978-79	67241	10.0	6724
1979-80	66509	10.0	6651
1980-81	66740	10.5	7008
1981-82	63390	10.5	6656
1982-83	60898	10.5	6394
1983-84	59805	10.5	6279
1984-85	55423	10.5	5819
1985-86	52538	10.5	5516
1986-87	51596	10.5	5418
1987-88	52074	10.5	5468
1988-89	53704	10.5	5639
1989-90	52943	10.5	5559

Drawing area: Lake and Cuyahoga counties. Enrollment as reported by the Board of Regents' Student Inventory Data (through 1972-73).

FIGURE 2-8
Fall Enrollment Projections for Lakeland Community College
Lakeland Community College Research Services

Year	Headcount	Percent of change from previous year	Percent of population served	Difference from previous year	F.T.E. (Full-time enrollment)[1]	Percent of change from previous year	F.T.E / Headcount Factor[2]
1967	1073		0.6	.3	661	54%	.616
1968	1627	52%	0.9	.3	1015.8	54%	.624
1969	1987	22%	1.0	.1	1308.2	29%	.658
1970	2400	21%	1.2	.2	1553.1	19%	.647
1971	3315	38%	1.6	.4	2065.5	33%	.623
1972	4200	27%	2.0	.4	2489	21%	.593
*1973	5105	22%	2.4	.4	2904.2	17%	.569
**1974	5207	2%	2.4	0.0	2963	2%	.569
1975	5743	10%	2.6	.2	3268	10%	.569
1976	5879	3%	2.6	0.0	3355	3%	.569
1977	6050	3%	2.6	0.0	3442	3%	.569
1978	6204	3%	2.6	0.0	3530	3%	.569
1979	6357	2%	2.6	0.0	3617	2%	.569
1980	6510	2%	2.6	0.0	3704	2%	.569
1981	6649	2%	2.6	0.0	3783	2%	.569
1982	6787	2%	2.6	0.0	3862	2%	.569
1983	6925	2%	2.6	0.0	3940	2%	.560
1984	7064	2%	2.6	0.0	4019	2%	.569
1985	7202	2%	2.6	0.0	4098	2%	.569

*1967-1973 are actual enrollment figures.

**Everything below this line is a projection based on percentages of the Lake County population being served. The actual enrollment in Fall, 1974, was 5,764 considerably higher than the estimate.

[1] F.T.E. is the total number of credit hours divided by 15, the presumed average academic load of a full-time student.

[2] F.T.E. divided by headcount.

Source: "Population and Enrollment Projections for Internal Budgeting Purposes," Research Services Office, Lakeland Community College, revised 5/20/74.

GREATER CLEVELAND DEMOGRAPHICS AND POPULATION PROJECTIONS

The life of Lake County is closely linked to that of Cuyahoga County. The business and economic growth of Lake County would have been difficult without the influence of Cleveland; therefore, a brief review of "greater Cleveland" is appropriate. For purposes of government analysis and reporting, the Cleveland metropolitan area is usually classified as a four county standard metropolitan statistical area (SMSA). The four counties officially included in the Cleveland SMSA are Cuyahoga, Lake, Geauga, and Medina Counties. Cuyahoga, the central county, has more than 80% of the estimated 2.1 million metropolitan area population. Cuyahoga ranks seventh in county population in the U.S. Lake has approximately 202,600, but Geauga (66,300) and Medina (89,000) are sparcely populated.[10] Although "Cleveland" is reported as a four county SMSA, the actual size of this market area is distorted; the economic and social influence of the metropolitan area may be much larger. As one source stated:

> For some, the Cleveland SMSA extends beyond those limits. The Northeastern Ohio Areawide Coordinating Agency (NOACA) currently uses seven counties for its regional planning adding Lorain, which officially constitutes a one-county Lorain-Elyria SMSA (population: 260,000), and Summit and Portage counties, which make up Akron's SMSA (population: nearly 700,000).
>
> "Lorain meets the criteria for inclusion in Cleveland's metro area," says NOACA exectuvie director Fred Pizzedaz. "In fact, Roy Ash, Director of the Office of Management and Budget, tells me they're going to start including Lorain in their Cleveland statistics." Ironically, NOACA itself faces an uncertain future--it is due to lose its two Akron counties to a new agency this summer, and Pizzedaz is fighting to prevent Medina from going with them.
>
> The Greater Cleveland Growth Association (the local Chamber of Commerce) defines an eight-county "Greater Cleveland," adding Ashtabula, also a one-county SMSA (population: nearly 100,000). Thus Akron's rubber companies bolster the Growth Association's claims for Cleveland as a headquarters town, and Goodyear

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[10] 1974 Survey, op. cit., p. D-84.

> and Firestone head the list of "Greater Cleveland" corporations.
>
> The Cleveland Plain Dealer has an even broader outlook, equating the Cleveland market with the 19-county TV Area of Dominant Influence (ADI), with a population of over 4 million, including the additional SMSAs of Canton, Masfield, and Sandusky. Moreover, many marketers who sell in Cleveland consider the area to include those counties plus the Youngstown-Warren SMSA, with its 500,000+ population.
>
> There does seem to be some justification for grouping all those urbanized areas. They're clustered in a relatively small area--Youngstown is only 65 miles from Cleveland, and downtown Cleveland and downtown Akron are a mere 35 miles apart, about the same distance that separates Dallas and Fort Worth.[11]

When using the SMSA as a comparison with other parts of the United States, we find the Cleveland SMSA ranked sixteenth in population, thirteenth in households, eighteenth in total retail sales, and twentieth in median income per household. One source states that Cleveland is second only to San Francisco in total number of families earning $10,000 or more.[12]

In terms of urban and economic growth, "Cleveland" extends some 100 miles along the shore of Lake Erie and more than 40 miles inland. Of the 88 counties in Ohio the three fastest growing between 1960 and 1970 are located in Greater Cleveland: Portage, 37%; Lake, 33%; Geauga, 32% increases.[13] This growth has been encouraged by the diversity of business and industry. Figures 2-9 (a), 2-9 (b), 2-10, and 2-11 review some additional demographic characteristics and population estimates for the Cleveland SMSA and the sixteen counties of Northeastern Ohio.

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[11] Don Korn, "Comeback on the Cuyahoga," Sales Management, May 13, 1974, pp. 27-41.

[12] Cleveland Data Sheet, Cleveland Magazine, Cleveland, Ohio, 1974.

[13] Greater Cleveland Growth Association, Research and Planning Department, March, 1974.

FIGURE 2-9 (a)

Demographic Characteristics for the Cleveland SMSA

Counties	1960 Population*	1970 Population	% Change 1960-1970	1970 Households*	% Owner Occupied*	% Gain 1960-1970	
						Owner	Renter*
Cuyahoga	1,647,895	1,721,300	4.5	554,239	59.5	11.0	12.4
Geauga	47,573	62,977	32.4	16,941	83.2	36.7	28.3
Lake	148,700	197,200	32.6	55,801	78.4	28.8	82.0
Medina	65,300	82,717	26.6	23,157	79.1	29.2	25.7
Metro Area	----	2,064,194	8.1	650,138	62.4	14.1	15.0
Central City	----	750,879	-14.3	248,212	46.0	- 5.7	- 9.9
Suburbs	----	1,313,315	----	401,926	72.5	24.4	73.0

Source: General Population Characteristics, Ohio Census of Population, U.S. Department of Commerce, Bureau of the Census, October 1971.

FIGURE 2-9 (b)

Demographic Characteristics of the Cleveland SMSA

Counties	Mean Household Income	Percent of All Households within Income Classes Under $5,000	$5,000-$7,999	$8,000-$9,999	$10,000-$14,999	$15,000 & Over	Total Familes	% of Households
Cuyahoga	$14,442	14.5	14.5	15.3	26.9	28.8	439,838	79.4
Geauga	15,973	13.0	13.3	14.7	25.8	33.2	15,387	90.8
Lake	15,638	9.0	11.8	15.3	31.3	32.6	49,804	89.3
Medina	14,357	13.5	15.1	15.4	27.3	28.7	20,597	88.9

Source: 1970 U.S. Census

FIGURE 2-10

ESTIMATED POPULATION

16 Counties - Northeastern Ohio

Source: Development Department -- State of Ohio

County	1967	Share	1970	Share	1975	Share	1980	Share
CUYAHOGA	1,773,730	39.6%	1,912,717	39.4%	2,041,889	38.8%	2,171,080	38.3%
6 Adjacent Counties								
GEAUGA	61,740	1.4%	69,023	1.4%	79,487	1.5%	89,950	1.6%
LAKE	197,832	4.4%	223,239	4.6%	259,600	4.9%	295,960	5.2%
LORAIN	261,987	5.9%	288,571	6.0%	323,240	6.1%	357,909	6.3%
MEDINA	80,729	1.8%	90,835	1.8%	103,284	2.0%	115,733	2.0%
PORTAGE	111,126	2.5%	120,338	2.5%	134,260	2.6%	148,182	2.6%
SUMMIT	569,683	12.7%	619,694	12.8%	671,463	12.8%	723,231	12.8%
	1,283,097	28.7%	1,411,700	29.1%	1,571,334	29.9%	1,730,965	30.5%
Next 9 Counties								
ASHLAND	41,927	0.9%	44,645	0.9%	47,511	0.9%	50,376	0.9%
ASHTABULA	100,954	2.2%	107,798	2.2%	114,984	2.2%	122,170	2.1%
ERIE	77,883	1.7%	83,821	1.7%	91,538	1.7%	99,256	1.8%
HURON	51,842	1.2%	55,498	1.1%	59,485	1.1%	63,471	1.1%
MAHONING	317,925	7.1%	344,402	7.1%	365,828	7.0%	387,253	6.8%
RICHLAND	133,879	3.0%	144,878	3.0%	158,106	3.0%	171,334	3.0%
STARK	369,923	8.3%	398,925	8.2%	427,500	8.1%	456,076	8.0%
TRUMBULL	236,921	5.3%	259,377	5.3%	284,183	5.4%	308,988	5.5%
WAYNE	86,133	2.0%	92,698	2.0%	101,088	1.9%	109,478	2.0%
	1,417,387	31.7%	1,532,042	31.5%	1,650,223	31.3%	1,768,402	31.2%
Total 16 Counties	4,474,214	100.0%	4,856,459	100.0%	5,263,456	100.0%	5,670,447	100.0%

FIGURE 2-11

Seven County Population Projections 1975-2000

Area	1975	1980	1985	1990	1995	2000
7-County	3,108,400	3,250,900	3,399,600	3,534,300	3,655,800	3,774,100
Cuyahoga	1,718,900	1,724,900	1,736,300	1,746,600	1,741,600	1,741,000
Geauga	73,700	86,100	98,500	112,000	128,000	140,800
Lake	230,300	266,500	298,100	318,700	335,200	348,000
Lorain	277,300	302,300	327,600	360,100	394,800	427,200
Medina	94,500	111,100	129,500	143,100	159,800	175,900
Portage	143,900	160,600	180,100	197,900	215,700	234,700
Summit	569,800	599,400	629,100	655,900	680,700	706,500

The median age of the population should increase from 28.2 in 1970 to 32.5 in the year 2000 due to the decreasing birth rate and decreasing out-migration. The population of the age group 20-64, an approximation of the labor force, will increase from 53% of the population in 1970 to 58% in the year 2000.

Source: Population Forecast 1970-2000, Northeast Ohio Areawide Coordinating Agency, Cleveland, Ohio, September, 1972.

BUSINESS AND INDUSTRY

Greater Cleveland has some rather remarkable business and industrial characteristics. This is discussed in more detail in Chapter VIII, but some of the more important highlights are mentioned below.

Greater Cleveland ranks sixth in the United States in value added by manufacturing (over $4 billion) and sixth in manufacturing employment.[14] Cleveland is also fifth in the nation in total shipments.[15] Auto parts, steel, metal-working, and machinery are the leading industries.

Greater Cleveland is third in corporate headquarters with twenty-three of the Fortune 500 leading industrials.[16] Such giants as TRW, Republic Steel, Eaton, and White Motors are located in the Cleveland area.

Cleveland-Northeastern Ohio is the world's largest producer of tires, paints, and tool and die equipment. It is second in the production of auto parts and apparel.[17]

Being one of the nation's largest industrial markets creates a variety of job opportunities. These opportunities are discussed in Chapter VIII and should be of interest to educators, parents, and students.

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[14] Korn, op. cit,., p. 40.

[15] "Survey of Industrial Purchasing Power," Sales Management, April 22, 1974.

[16] "The 500 Leading Industrials," Fortune, May 1974, pp. 230-251.

[17] Plain Dealer, Market Research Department, Cleveland, Ohio.

LABOR MARKET NEEDS

CHAPTER HIGHLIGHTS

*This survey contacted nineteen large Lake County employers representing manufacturing, retailing, utilities, hospitals, and banking.

*Most companies do not forecast rapidly expanding labor needs.

*Respondents seem to be satisfied with the new employees hired into the higher skilled job categories but are somewhat less satisfied with the lower skilled worker.

*The employment needs varied considerably by the type of business.

*Eighteen of the nineteen responding firms have some form of tuition reimbursement. The plans vary by job category and type of course reimbursed. The higher skilled jobs benefit more than lower skilled. College courses were favored by most plants.

BACKGROUND

It is essential for any project attempting to determine area career opportunities in Lake County to question the source of the careers, business and industry. In the 1969 Study, a massive survey of all firms in Lake County was attempted. The results were disappointing. The current project needed to improve on the earlier effort.

Sub-Committee Two, Labor Market Needs, in the current study attracted valuable volunteers. There were managers from a variety of business firms as well as several educators in its membership. Sub-Committee Two met four times formally, more frequently than any of the other groups. The discussion in these meetings was often lively, as guests from the educational institutions were asked to attend. The membership of Sub-Committee Two was:

Member	School Represented
Philip Blair Perfection Corporation	Madison
Jerry Brust Towmotor Corporation	Mentor
Donald Cleary Diamond Shamrock Corporation	Fairport
Robert Dover, Teacher-Coordinator Willoughby-Eastlake Schools	Willoughby-Eastlake
Edgar C. Joslin, Personnel Manager Cleveland Crane and Engineering	Wickliffe
Lester N. Nero, City Manager Painesville	Painesville
George Manning True Temper Corporation	Madison
John M. Sackl Cleveland Electric Illuminating Company	Mentor
Clem Urbanski Uniroyal Chemical	Fairport

OBJECTIVES

Through the survey, vehicle Sub-Committee Two hoped to achieve these objectives:

1. To determine career opportunities in specific industries;
2. To determine the adequacy of the preparation of employees at various job levels;
3. To discover whether training for any of the improperly prepared employees could be transferred to the schools;
4. To determine whether firms offer tuition refund plans for the various job categories.

LIMITATIONS

Sub-Committee Two did not intend this survey to meet all the precise tests of scientific research and sampling. This was emphasized in two separate meetings. Instead, they recommended a procedure which would get more qualitative data from a small quota sample using the personal interview format and receiving broad industry represenation. Therefore, this general lack of sampling and homogenity of the interviewing is an obvious limitation of this research. On the positive side, the committee members and the companies contacted are to be congratulated on the quality of the information received and reported below.

PROCEDURES FOR COLLECTING DATA

A questionnaire was developed by Sub-Committee Two to be administered personally by each sub-committee member. The plan was to have eacj sub-committee member conduct personal interviews with three different firms. Most of the interviews were with personnel managers, while several were with other administrators.

The questionnaire itself asked information about the nine job categories delineated by the Equal Employment Opportunity Commission (EEOC), presumably familiar to all personnel managers. The nine job categories were officials and managers, professionals, technicians, sales, office and clerical, craftsmen (skilled), operatives (semiskilled) laborers (unskilled), and service workers. A detailed description of each job category as well as the questionnaire used are presented in the appendix.

Most of the interviews were conducted during June and July of 1974. Not all committee members were able to complete their interviews. There were enough, however, to provide the information below.

PRESENTATION OF THE DATA

In all, nineteen companies responded. These companies and institutions represented a wide range of employment, including retailers, manufacturers, construction firms, banks, utilities, and hospitals. The names, SIC numbers, and number of employees in Lake County are listed below.

FIGURE 3-1

Responding Firms - Labor Market Needs Survey

	SIC*	Lake County Employment
American Modular Tech. (Amotek)	2452	65
Bailey Meter Co.	3611	2000
Carlisle-Allen Co.	5311	250
Citizens Savings and Loan Co.	6022	65
Cleveland Crane and Engineering Co.	3536	725
Cleveland Electric Illuminating Co.	4911	26
Coe Manufacting Co.	3553	400
Dalton, Incorporated	2335	2000
Diamond Shamrock Corporation	2812	1130
Gold Circle	5331	225
The Higbee Co.	5311	375
I R C Fibers	2823	900
Lake County Memorial Hospital	8061	992
Lake County National Bank	6025	500
Lindsay Wire Weaving	3481	75
Mill-Rose Company	3991	100
Ohio Rubber Co.	3069	1500
R. W. Sidley	3713	375
Uniroyal Chemical	2821	452

*The SIC (Standard Industrial Classification) was developed by the federal government for use in classifying establishments by type of activity in which engaged. It promotes uniformity and comparability in the preparation of statistical data.

Officials and Managers

All but two responding firms indicated that less than ten percent of their employment needs in the next four years (1974-1978) will be in this job category. Only Gold Circle and Bailey Meter foresee a larger growth. Two firms, Gold Circle and Lake County National Bank, considered officials and managers a rapidly expanding job category.

All but three firms believed that people hired into this job category are fully qualified. These three firms cited human relations skills, basic managerial principles, and a small decline in attitude toward work as the primary problems.

Eight of the nineteen respondents indicated the officials and managers job category did not require specific vocational training. Eleven respondents indicated they did need job training.

Professionals

Fourteen companies reported they employed professionals. Nine forecast that below 19% of their employment needs by 1978 will be in this job category while five firms see 11-20%. Only four firms considered this a rapidly expanding job category: Bailey Meter Co., Lake County Memorial Hospital, Ohio Rubber Co., and Cleveland Crane and Engineering.

Four firms indicated inadequate preparation of people hired into this job category. Lack of practical experience was cited as a problem by three firms. Decision-making techniques and improved written and oral presentations were mentioned by another firm.

Technicians

All but three of the fourteen firms employing technicians cited below 10% of employment needs in this job category through 1978. These three indicated 11-20% of their employment needs in this occupation, seeing this as a rapidly expanding job category.

Only four firms believed employees hired into this job category have not been fully qualified. These four firms cited human relations skills, practical work experiences, and the lack of certain basic technical skills as the primary weaknesses. One respondent stated, "Usually the basic skills you would expect to be developed in high school are lacking."

Most respondents see this as a job category requiring specific vocational training. Two of the firms believed schools could take over this type of training.

Sales

Twelve responding companies reported employment of sales people. All of the industrial companies reported below 10% of their employment needs by 1978 will be in this category. Two of the three retailers responding indicated 51-75% of their needs will be in this category; the other retailer reported 76-100%. Only two of all the companies (both retailers) indicated this is a job category increasing rapidly with their firm.

Only two responding firms believed the qualifications of persons moving into this category to be inadequate. The two retailers who disagree cited a general lack of sales training and work experience as weaknesses. One retailer suggested a stress of work habits, positive attitude, dependability, and initiative as major job attitude problems.

Office and Clerical

Eighteen companies responded to this questionnaire. There was considerable difference in the percentage of employment needs by 1978 of the various firms: seven firms said below 19%, four indicated 11-20%, one each cited 21-35% and 36-50%, and both banks questioned reported 76-100%. Five of the firms reported this as a rapidly growing job category.

Five of the eighteen responding firms were critical of the qualifications of persons entering this job category. Each firm said these new employees could be better prepared to assume their job responsibilities. In the area of job skills, the specific suggestions of respondents were as follows:

1. "Basic tools of typing, bookkeeping, etc."
2. "Accounting and bookkeeping skills."
3. "Recent high school graduates seem to have taken too easy courses and have no specialized training."
4. "Weak math background for high school graduates."
5. "Difficult to find good office personnel."
6. "Typing skills seems to be adequate, but are secondary to general office know-how, bookkeeping, cost accounting, etc."
7. "Schools need to emphasize importance of learning skills and their application. Curriculums are adequate but feel new employees have not profited from education offered."
8. "Most clerks freshly out of school are poor spellers, have difficulty with English, have very little if any understanding of economics and the free enterprise system."
9. "A more practical approach in relating class material to the actual business world."

Five companies made these suggestions under job knowledge.

1. "More basic education is required for development of a good employee. English, spelling, and punctuation or general intelligence are lacking in many of our new employees."

2. "Improvement in job knowledge would be helpful."

3. "Record keeping and payroll procedures."

4. "Weak in math, accounting, bookkeeping, record keeping skills."

5. "I have found seniors and recent graduates who cannot add or subtract fractions and are very poor in basic math."

All five firms responded to improvements in job attitudes with these specific comments:

1. "Most important ingredient of a good employee. Schools should emphasize that enthusiasm, good motivation, company loyalty, etc., will compensate for skill deficits."

2. "Pride in performance, role, etc."

3. "This area is the biggest problem."

4. "The employee doesn't seem to want to expend the effort to accomplish anything."

5. "Take jobs because they want the money rather than to perform the job."

6. "Weak desire to achieve."

7. "Rather hire a 35-year-old woman than a 20-year-old high school graduate."

8. "They must be willing to accept their responsibilities."

Four of these firms believed that schools could take over much of this training. To that end, one firm made these suggestions:

> "Expand math in the high school. It appears that applicants only take minimum math requirements through the junior high and little, if any, in high school."
>
> "Typing; math; familiarity with office machines, particularly electronic calculators and duplicating equipment."

Also sixteen of the companies contacted indicated this job category requires specific vocational training.

Craftsmen (Skilled)

Fifteen responding companies reported employment of some craftsmen. Only three see their employment needs increasing rapidly. Eleven companies reported that below 10% of their employment needs will be in this job category. Coe Manufacturing (11-20%), Cleveland Electric Illuminating (21-35%), and Cleveland Crane and Engineering (51-75%) reported differently.

Only three companies reported dissatisfaction with the qualifications of persons hired into this category. One firm said it is "very difficult to find qualified craftsmen unless you are willing to pay top dollar." Another said, "Skilled tool makers are very scarce and the need does exist for a two-year course on tool and die making. Decision-making and industrial management skills are also lacking." One other company cited the problems of getting mechanics and skilled maintenance people. Still another reported, "In today's labor market, there are very few of the above and our training programs (vocational) are not meeting the demands of industry."

Operatives (Semi-skilled)

Fourteen responding firms employ operatives, but only three reported this as a rapidly expanding career field with their company. There is a wide variance in the percentage of employment needs through 1978 for this job category. Two firms reported below 10%, one 11-20%, four 21-35%, two 36-50%, two 51-75%, and four 76-100%.

Surprisingly, ten firms, 71% of those responding, believed employees hired into this job category are *not* fully qualified. Here are their reactions in the area of *job ski[illegible]*:

1. "Employees in this group often have no special skills. They must be trained in the basics in order to perform."

2. "More emphasis should be put on on-the-job training rather than just theory. Our experience in hiring boys from the Lake County Vocational School has been good, and vocational schools have been one of the finest helps to industry in years."

3. "Basic math--adding and subtracting; spelling skills; reading skills; manual dexterity. Women seem to have better manual dexterity than men."

4. "The type of people making application into these categories is almost unbelievable. Applicants claim they are high school graduates, but prepare the application form indicative of one who never completed the sixth grade. Many fail the basic math test because they cannot add or subtract. Many have a very poor, "I don't care" attitude, and the appearance of those applying leaves much to be desired."

5. "More concentration on basic machines and manual skills. Industry will polish them."

Representative comments about job knowledge were:

1. "Training themselves to remember. Much of the on-the-job training must be repeated either because of poor attitude or lack of comprehension; they cannot remember from one day to the next--very little retention."

2. "Even when the required skills are available, the employees must be trained to apply those skills to our products."

3. "More intensive basic math courses, blue print ready, and courses that develop basic reading and understanding skills."

The comments concerning job attitudes were:

1. "Prepare people for factory environment, e.g., shift work, overtime, weekends, safety equipment, proper dress."

2. "Can you teach someone to be dependable and have a desire to do a good job, whatever the assignment?"

3. "Attitude is bad for the group 30 years and younger; above 30 years they seem to have a more responsible attitude. Attitude toward the job is the #1 reason new hirees are fired. Employees of minority groups resent training since they resent being told what to do."

4. "It is essential that the individual come in with a good attitude."

5. "They must be taught basic courses in economics, and their role in the overall scheme plus how to accept their responsibilities and how to develop decent work habits and attitudes."

BEST COPY AVAILABLE

Laborers (Unskilled)

Thirteen firms reported employment of laborers. None of these firms considered it a rapidly expanding job category. Five firms reported below 10% of their employment needs will be in this job category through 1978. Two firms reported 11-20%, four 21-35%, one 36-50%, and one 51-75%.

Only four responding companies believed persons hired into this category are not fully qualified. The only negative comments dealt with problems of job attitude. Four comments were:

1. "Most applicants, somewhere in life, have lost their desire and their willingness to achieve or improve themselves."
2. "They think Welfare will take care of them; will take a day off whenever they wish; lack dependability."
3. "Most who apply for this category are high school dropouts, slow learners, displaced persons, and low achievers."
4. "People don't have the desire to work--only need this and ability to follow orders."

Service Workers

Fourteen companies reported employment of service workers. Only one, Lake County Memorial Hospital, considered this a rapidly expanding job category. Eight companies reported below 10% of their employment needs through 1978 will be for laborers. Two cited 11-20%, four 21-35%, and one 36-50%.

Only four are dissatisfied with the qualifications of those hired into this job category. Surprisingly, no specific comments were made regarding the improvement of people hired into this job category.

Attitudes Toward Work

There were strong feelings about the qualifications and attitudes of some employees by both Sub-Committee Two and most of their guests. The problem of attitude toward work was discussed during each meeting with unanimity of opinion on most points. Their concern seemed supported by the attention given in the press and literature on the decline of the so-called "Protestant Work Ethic." Therefore, two questions were included in the questionnaire to determine the quality of the beginning employee in each of the nine job categories.

This concern over job attitude does not seem to have wide support based on this study. But as the job category tended to be less skilled, a greater frequency of concern over "sagging" work attitudes was noted.

Tuition Refund Plans

The fact that tuition refund plans can be a significant source of students for continuing education and college courses led to asking the nineteen responding firms about their programs to that end. The companies were asked whether tuition refund plans were available for each of the nine job categories. For each of the nine job categories it was determined whether these reimbursement plans were avialable for college, high school credit, or high school non-credit courses. The results are presented in Figure 3-2.

FIGURE 3-2

Tuition Refund Plans

	Number of Firms Responding Yes			
Job Category	College Courses	High School Credit Course	High School Non-Credit Courses	Total Firms Responding
Officials and Managers	16 (94%)	6 (35%)	4 (23%)	17 (100%)
Professional	13 (92%)	5 (35%)	3 (21%)	14
Technicians	13 (100%)	4 (30%)	3 (23%)	13
Sales	10 (83%)	3 25%)	1 (8%)	12
Office and Clerical	17 (94%)	8 (44%)	6 (33%)	18
Craftsmen (Skilled)	11 (78%)	8 (57%)	6 (42%)	14
Operatives (Semiskilled)	8 (60%)	6 (46%)	5 (38%)	13
Laborers (Unskilled)	6 (60%)	5 (46%)	4 (36%)	11
Service Workers	8	5	4	12

Only one firm did not have some type of tuition refund plan. However, the plans did not apply to all job categories. There was a tendency for the less skilled jobs not to have these refund plans available. Secondly, college courses were favored most frequently by responding firms in seven of the nine job categories.

The surprisingly high number of firms with tuition refund plans is supported by an unpublished report on Cuyahoga County firms.[1] All ten of the randomly selected firms representing 30,380 employees had such plans. This area certainly seems worthy of future research and exploitation by Lake County Schools.

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[1] Kermit Lidstron, "A descriptive Study of the Tuition Reimbursement Policies of Ten Major Corporations in Cuyahoga County, Ohio," A Practicum Project, Nova University, Fort Lauderdale, Florida. December, 1974.

CAREER PROGRAMS AND ENROLLMENTS

CHAPTER HIGHLIGHTS

*This chapter reviews the results of two questionnaires sent to school superintendents and adult education directors.

*College Preparatory was the program with the highest enrollment. Of the comprehensive high schools, the percent of all 1973 graduates that went on to college ranged from 55% to 30% at the various high schools.

*Four of the seven responding schools had a formally structured career education program. Four of the seven had early dismissal. Three of the seven had a career placement office.

*Some innovations in career-oriented courses are presented.

*Student enrollment in the career-related courses and programs is presented for the seven responding schools and Lakeland Community College.

*An inventory of the past and future adult (continuing) education course offerings of five high schools (three did not offer adult education) and Lakeland Community College is presented.

The Lake County Career Opportunities Study would be incomplete if it failed to request data from the educator, a primary delivery system for career preparation. In other chapters, information concerning student aspirations and labor market needs is presented. The following chapter reports on career programs, their enrollments, selected questions concerning career programs and adult (continuing) education offerings past and future. Additional data on school enrollments is presented in Chapter II of this report.

Sub-Committee Three, Existing Programs and Facilities, planned the gathering of the material presented in this chapter. The membership of the committee and the schools they represented was as follows:

Dorothy Westerhoff, Chairperson
Painesville Township Schools

L. M. Berichon, Employment Manager
T R W
Willoughby-Eastlake Schools

Almeida Evans
Painesville Township Schools

William Kendra, Vocational Director
Wickliffe Schools

Joseph Lesak, Treasurer
Mentor Schools

Peter Oberson, Director
Lake County Joint Vocational Schools

Robert Setzer, Manager
Horton Nursery
Mentor Schools

Lynn Russell, Director
Community Services
Lakeland Community College
(Former Director, Painesville YMCA)

OBJECTIVES

Sub-Committee Three set out to achieve these objectives:

1. To determine the program affiliations of all students.
2. To determine the student enrollment in vocational and career related courses.
3. To determine adult/continuing education courses offered throughout Lake County.
4. To determine the answers to selected questions of importance to the committee.

PROCEDURES FOR COLLECTING DATA

Two questionnaires were drafted by Sub-Committee Three to gather the information pertinent to the objectives. The questionnaires were pre-tested with two superintendents and then mailed in May, 1974, to each superintendent of schools in Lake County.

The first questionnaire was to be representative of the high school(s) in that district. Seven of the eleven high schools returned this questionnaire, which is illustrated in the appendix.

The second questionnaire was received ultimately by the directors of adult education in the various school systems. Eight of the eleven high schools replied. The questionnaire is illustrated in the appendix as well.

SUPERINTENDENTS' QUESTIONNAIRE

The seven responding schools represented 9,645 students who for the most part were in the tenth, eleventh, and twelfth grades. The program afiiliations of the various schools are reported in Figure 3-1. Because some schools did not provide number totals, we cannot be specific on the total for all reporting schools. However, we can speculate on the rank order of the programs county-wide. The rank order of the programs for all students was college preparatory, vocational, general, business education, and industrial arts.

FIGURE 4-1

Program Affiliation of High School Students, Spring, 1974

	South H.S.		Perry H.S.		Mentor H.S.		Harvey H.S.		Wickliffe H.S.	Fairport H.S.
	%	#	%	#	%	#	%	#	%	%
College Preparatory	40	575	26	140	40	1120	55	275	40	52
General Education	37	500	15	82	26	720	10	50	20	8
Vocational Education**	8	125	14	74	16	460	35	175	20	40
Business Education	5	75	17	94	54	1500	*		15	-
Industrial Arts	10	150	28	152	33	924	*		5	-

*Business Education and Industrial Arts students were included in the totals for College Preparatory and General Education.

**Lake County Joint Vocational School reported 395 students in vocational programs but none in any of the others.

SELECTED QUESTIONS

A series of selected questions were asked of the superintendents based on the interests of Sub-Committee Three. The first of these asked whether high school students were required to participate in either industrial arts or home economics courses. None of the respondents indicated this was so. Presumably most or all schools required one of these two courses in junior high. In addition, the respondents indicated no restrictions to boys taking home economics or girls enrolling in industrial arts courses.

Four of the seven schools reported they presently had a formally structured career education (career exploration) program for high school students. These schools were Mentor High, Perry High, and Painesville Harvey (eighth grade only). Lake County Joint Vocational School reported that Kirtland High, which they serve, has a formally structured career education program.

A question concerning the percentage of 1973 graduates that went on to college was included in the questionnaire. Painesville Harvey High School had the largest percentage of college-bound students at 55%. Following in rank order were Fairport Harding High School with 43%; Wickliffe High School with 32%; Perry High School with 30%. Lake County Joint Vocational School reported a total of one percent who attended college. This is understandable because of the job entry nature of vocational programs. Some related data on the college plans of high school students is presented in Chapter five, Figures 5-2, 5-3, and 5-4.

Another group of related questions dealt with whether courses in industrial arts, home economics, business, and performing arts were considered career exploration or skill training. All reporting schools consider each of these types of courses to be skill training. In addition, two schools, Willoughby South and Wickliffe High Schools, considered them to be career exploration as well.

Early Dismissal

Four of the seven responding schools indicate that some of their students take advantage of early dismissal. The schools and the numbers of students involved are Mentor High (500), South High

(400), Wickliffe High (200), and Perry High (25). The schools where early dismissal is not an option are Fairport Harding High, Lake County Joint Vocational School, and Painesville Harvey High School.

Currency and Career Experiences of Teachers

Respondents were asked whether they had a systematic method to insure that technical/vocational/business teachers would keep current in their respective fields. Four of the seven said they had a system to ensure occupational currency of these kinds of teachers; three did not. The specific systems to ensure currency were in-service courses (two schools), professional visitation days (two schools), released time to attend seminars and workshops, pay incentives, up-grading programs, and grants.

Only two of the seven responding schools had a systematic way to encourage non-technical/vocational/business teachers (e.g. the general education teachers, English, History, etc.) to obtain career experiences other than in their teaching discipline. The methods used by the two schools were professional visitation days for teachers, released time for attendance at seminars and workshops, and in-service courses for six graduate credit hours from Ohio University.

Career Placement Offices

Three of the seven respondents indicate that their high school had a career placement office. All three indicate that over twenty percent of their students take advantage of the services of the office. The actual percentages may be much higher because the highest choice for the question was above twenty percent.

Vocational Counselors

A vocational counselor usually has his primary responsibility to help vocational students plan programs and schedules, advise prospective candidates for vocational programs, and be a resource of career data. Each school was asked whether it employed vocational counselor(s) and if so how many? Only two of the responding schools did not employ a counselor exclusively designated as vocational. Three schools employed one, one school employed two, and one school employed three or more vocational counselors. Additional data on counseling are presented in Chapter VII of this report.

Follow-Up Surveys of Graduates

One of the primary ways to evaluate programs and courses is through the use of follow-up surveys of graduates. This is an activity required by the Ohio State Department of Vocational Education for programs receiving funds from its office. Each of the schools were asked whether they require follow-up surveys for all career program graduates. Four of the six comprehensive high schools required follow-up surveys on nearly every program. One school required them for only vocational and business education programs. Another school required a follow-up survey for only vocational graduates. The questionnaire did not determine the quality, depth, or frequency of the follow-up studies. This may be a legitimate area of future research.

Innovations in Career-Oriented Courses

Each school was asked to identify innovations in career-oriented courses or programs attempted (such as mini-courses) in order to broaden the occupational information or experience base of their student body. Below is listed the verbatim responses of all respondents.

School	Innovation
Fairport Harding High	Independent Study
Lake County Joint Vocational School	Summer mini-courses in vocational areas
Painesville Harvey High	Career exploration mini-courses; 8th grade, 9th week.
	Summer school career planning program
Perry High	World of Work
	Interest Centers-Community resource people visit school. Students released during study halls
South High	Sponsored two-day experimental school program involving careers hobbies, and vocations.
	Participate in Career Day at Lakeland Community College
	Boy Scout Explorer program
	Sponsor two-day sessions with all 11th graders.
Mentor High	Career seminars - 1 hour, 5 times a week.
	World of Work

Student Enrollment in Career-Related Courses and Programs

Each of the seven reporting schools was asked to indicate by grade the number of students in their career-related courses and programs. Since four of the public schools in Lake County did not return the questionnaire, the totals for each of the categories obviously do not represent Lake County totals but rather minimum enrollments. Figures 3-2, 3-3, 3-4, 3-5, and 3-6 review the career-related high school course and program enrollment for Fairport Harding, Lake County Joint Vocational, Mentor, Painesville Harvey, Perry, Wickliffe, and Willoughby South High Schools.

Figure 4-2

Lake County Vocational Education Program Enrollments

Title		Grade Level		Total
	10	11	12	
Child Care	0	20	22	42
Chef Training	0	26	22	48
Machine Shop	0	55	29	84
Auto Mechanics	0	39	43	82
Graphic Arts	0	3	1	4
Auto Body	0	35	31	66
Carpentry	0	0	0	0
Drafting	0	40	35	75
Occupational Work Experience	2	67	66	135
Diversified Coop. Training	0	0	80	80
Elect. & Electron	0	35	27	62
Data Processing	0	40	37	77
Intensive Office Education	0	19	18	37
Copy Technician	0	1	0	1
Cooperative Office Education	0	0	14	14
Distributive Education	0	0	80	80
Horticulture	0	3	22	25
Clerk-Typist	0	1	2	3
Stenography	0	18	17	35
Other	18	83	65	166

Figure 4-3

Lake County Home Economics (Non-Vocational) Course Enrollments

Title	Grade Level			Total
	10	11	12	
Clothing	131	143	105	379
Foods	156	256	202	614
Child Care	0	89	96	185
Home Management	0	28	171	199
Interior Decorating	0	42	52	94
Consumer Education	34	27	69	130
General Home Econ.	18	16	40	74

Figure 4-4

Lake County Business Education (Non-Vocational) Course Enrollments

Title	Grade Level			Total
	10	11	12	
Retailing	11	21	8	40
Salesmanship	8	39	48	95
Accounting/ Bookkeeping	117	194	133	444
Bus. English	0	0	23	23
Bus. Machines	0	10	95	105
Bus. Math	50	76	78	204
Gen. Business	169	23	21	213
Data Process.	0	27	50	77
Note Hand	38	33	22	93
Office Pract.	0	23	65	88
Shorthand	0	185	110	295
Typing	1212	526	276	2014
Other	0	54	123	177

Figure 4-5
Lake County Industrial Arts
(Non-Vocational) Course Enrollments

Title	Grade Level 10	11	12	Total
Drafting	283	178	196	657
Auto Mechan.	60	60	71	206
Elec. & Electron.	193	125	96	414
Woodworking	412	170	88	670
Gen. Shop	0	0	0	0
Gen. Metals	339	130	83	552
Graphic Arts	11	40	37	88
Power Mechan.	89	59	30	178
Machine Shop	71	103	73	247
Shop Math	8	0	3	11
Welding	209	129	138	476
Other	0	0	8	8

Figure 4-6
Lake County Performing Arts
(Non-Vocational) Course Enrollments

Title	Grade Level 10	11	12	Total
Drama	192	113	93	398
Theatre	0	2	20	22
Vocal Music	507	368	367	1242
Orchestra	43	32	166	241
Band	315	275	245	835
Speech	32	173	161	366
Debate	18	21	16	55
Dance	50	50	50	150
Art	238	360	372	970
Other	91	57	82	230

Enrollment in Lakeland's Technical Programs

Considerable publicity has been given to the projected growth of technical (paraprofessional) jobs. The national need for technical skills arising from expanding technology is growing at least twice as fast as the need for professional skills. Over a thousand community colleges in the United States offer programs to train technicians (paraprofessionals) enrolling 750,000 students.[1] Lakeland Community College offers numerous technical education programs. Those programs and their enrollments are listed in Figures 3-7, 3-8, and 3-9. An asterisk (*) indicates which programs have been added since 1969 when the first Lake County Career Opportunities Study was completed.

FIGURE 4-7

Intended Educational Goals of LCC Students[1]
Fall Quarters
1974 and 1973

	1974		1973	
Program	No. Students	% Headcount	No. Students	% Headcount
AA Degree	1,895	32.9%	1,360	26.6%
AAB Degree	1,139	19.8	1,320	25.9
AAS Degree	1,224	21.2	1,165	22.8
Certificates	369	6.4	199	3.9
Personal/ Professional	1,137	19.7	598	11.7
No program specified			463[2]	9.1
TOTAL	5,764	100.0	5,105	100.0

[1] Includes students who have: a) specifically declared an intended goal at admission, b) declared a degree but undecided on a concentration, c) and those who did not declare a goal but are reflected in a program from prior program data (may or may not be valid enrollees in a stated program.)

[2] Data collection methodology has been refined since 1973, therefore, there is no need for such a figure in 1974.

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[1] John F. Grede, "The Role of Community Colleges in Career Education," cited in Essays on Career Education, U.S. Office of Education, Northwest Regional Educational Laboratory, April, 1973, pp. 117-118.

FIGURE 4-8

Intended Educational Goals of LCC Students
Fall Quarters
1974 and 1973

Associate in Applied Science

Program Title	Students in AAS Programs		Certificate Goal*+	
	1974	1973	1974	1973
Health Technologies				
* Dental Hygiene	81	72		
* Medical Lab. Tech.	75	58		
Nursing	333	305		
TOTAL	489	435		
Engineering Technologies				
Civil/Arch. Eng.	68	75	9	4
Electronic Eng.	172	164	35	11
* Environment Eng.	32	3	7	
Industrial Eng.	78	74	12	10
Mechanical Eng.	132	113	7	3
TOTAL	483	429	70	28
Public Service Technologies				
* Child Development	59	68	41	29
Law Enforcement	229	266	3	
* Fire Technology	25			
TOTAL	313	334	44	29
AAS as goal but undecided on concentration	53	24		
GRAND TOTAL AAS	1338	1222	114 **	57 **

* Indicates a program established after the 1969-70 academic year.

** The numbers in the "certificate goal" column are not in addition to data in columns 1 and 2. They are included in those totals. They are shown for comparative purposes.

+ Certificate programs generally involve the completion of twenty-seven credit hours (nine three-hour courses) in a technical area.

FIGURE 4 -9

ENROLLMENTS BY PROGRAM
Fall Quarters
1974 and 1973

Associate in Applied Business

Program Title	Students in AAB Programs		Certificate Goal*+	
	1974	1973	1974	1973
Accounting	214	234		
*Banking Finance	40	60		
*Business Management	331	293	71	34
Data Processing	174	184	36	15
*Graphics Tech.	62	52		
*Industrial Management	134	86	28	12
*Real Estate	134	217	69	56
Retailing	42	68		
Secretarial Science	205	217	38	17
AAB as goal but undecided on concentration	45	43		
TOTAL	1381	1454	242**	134**

* Indicates a program established after the 1969-70 academic year.

** The numbers in the "certificate goal" column are not in addition to data in columns 1 and 2. They are included in those totals. They are shown for comparative purposes.

+ Certificate programs generally involve the completion of twenty-seven credit hours (nine three-hour courses) in a technical area.

Business technology programs at Lakeland enrolled 1,381 students or 28.5% of the total student headcount. Associate in Applied Science technical programs enrolled 1,338 students or 24% of the total headcount as of Fall, 1973.

In summary, technical programs accounted for 42% of the students enrolled at Lakeland. This is high compared to most community colleges nationally in which only 30% of the students were enrolled in career programs.[2] In addition to the 42% is the 6.4% of students enrolled in technical certificate programs.

Planned Programs

Each superintendent was asked to indicate if any programs now in the planning stages would be implemented between Spring, 1974, and Spring, 1977. Five of the seven responding schools answered this question, and the programs they mentioned are listed below.

School	Program	Grade Level
Fairport	Dramatics	9-12
	O.W.A.	9-10
	O.W.E.	11-12
	Independent Study	9-12
Lake County Joint Vocational School	High Skill Steno	11-12
	Diversified Health	11-12
	Office Duplication	11-12
	Fabric Service	11-12
	Building Maintenance	11-12
Painesville Harvey	Electronics	11-12
	Child Care (expansion)	11-12
	Auto Shop - Mechanical	11-12
	Machine Shop (expansion)	11-12
	Home Economics	11-12
Perry	Career Education	K-12
Wickliffe	Voc. Automotive Mechan.	11-12
	Voc. Electronics	11-12
	Voc. Food Services	11-12

Lakeland Community College has several programs now in the planning stages which will be offered by Spring, 1977. They are a Bio-Medical Instrumentation Technology program, a Word Processing option to the Secretarial Science program, Fluid Power option in the Mechanical Engineering program, an Engineering Design program, a Kidney Dialysis program, Human Service Generalist program, a one year certificate program for the Respiratory Technician, and Mass Media Technology. A Fire Science program was added during the 1973-74 academic year.

ADULT (CONTINUING) EDUCATION SURVEY

Non-credit adult (continuing) education courses can supplement the career-related courses and programs of any school system. In recognition of the important role continuing education cay play in this effort, Sub-Committee Three drafted and mailed a questionnaire to each of the public school adult education directors in Lake County. The Sub-Committee realized that non-credit courses are offered by a wide variety of institutions and organizations such as churches, labor unions, recreation departments, YMCA's and YWCA's, etc. However, the role the public schools had in this activity was the question asked by Sub-Committee Three. The questionnaire used is presented in the appendix.

Eight of the eleven high schools returned the questionnaire. Three of the responding schools, Mentor, Painesville Riverside, and Perry High Schools, indicated they did not offer non-credit courses at this time. One other school sent a brochure of offerings but did not complete the questionnaire.

Adult (Continuing) Education Offerings of Lake County Schools

The first question asked each school to indicate what continuing education courses (career-related or not) had been offered by the school system over the last three academic years (1971-72, 1972-73, 1973-74). The courses offered by the five responding schools are listed on the following pages.

Fairport Harding High

1. Oil Painting
2. Rug Hooking
3. Men's Gym
4. Women's Gym
5. Crocheting
6. Furniture Refinishing
7. Decoupage
8. Beginning Knitting
9. Advanced Knitting
10. Shorthand I
11. Transcription
12. Woodworking
13. Beginning Typing
14. Accounting
15. Beginning Sewing
16. Advanced Sewing
17. Rug Braiding
18. Upholstering
19. Cake Decorating

Lake County Joint Vocational School

1. Air Conditioning & Refrigeration
2. (Auto) Body Beautiful
3. Auto Brake Service
4. Auto Mechanics for Women
5. Auto Pollution Control Devices
6. Auto Tune-Up
7. Blueprint Reading (Industrial Electricity)
8. Blueprint Reading (Machine Trades)
9. Blueprint Reading (Welding)
10. Instrumentation
11. Basic Electricity
12. Industrial Electricity, D.C.
13. Industrial Electricity, A.C.
14. Machine Shop I
15. Machine Shop II
16. Arc Welding I
17. Arc Welding II
18. Data Processing I
19. Flower Arranging
20. Cake Decorating
21. Landscape Designing
22. Reading Improvement
23. Personality Development Seminar
24. Metric System
25. Real Estate Transactions
26. Income Tax Clinic
27. Buying & Selling Antiques
28. Effective Communications
29. How to Invest Wisely
30. Typing (Beginning)
31. Typing (Refresher)
32. Shorthand (Beginner)
33. Shorthand (Refresher)

Madison High School

1. Advanced Needlepoint
2. Basic Knitting
3. Basic Typing*
4. Beginning Tennis*
5. Bookkeeping*
6. Bridge I (Beginning)*
7. Business Machines*
8. Cake Decorating*
9. Ceramics I*
10. Ceramics II
11. Conversational Spanish*.
12. Flower Arranging*
13. Folk Guitar*
14. Art History-Art Appreciation
15. Home Gardening
16. Household Maintenance
17. Introduction to Knitting Skills
18. Law Everyone Should Know
19. Macrame
20. Marriage Enrichment
21. New Math
22. Notehand
23. Oil Painting*
24. Personal Typing*
25. Psychology In Everyday Living
26. Public Speaking
27. Sewing I*
28. Sewing II
29. Small Gasoline Engine*
30. Tailoring II*
31. Understanding the Stockmarket
32. Upholstery*
33. Woodworking I*
34. Typing II*
35. Folk Guitar II
36. Pottery-Creative*
37. Typing III
38. Crafts
39. Bridge II*
40. Sewing New Knits*
41. Upholstery II*
42. Stockmarket
43. Shorthand*
44. Tennis I*
45. Tennis II*

(*indicates successful course)

Painesville Area*

1. Cake decorating
2. Dressmaking I
3. Dressmaking II
4. Ground School Training
5. Tailoring
6. Conversational Spanish
7. Driver Education
8. Stationary Engineers & Boiler Operation
9. Power Squadron
10. Water Plant Operation
11. Family Life Education
12. Drug Education
13. Ecology
14. Women's Chorus
15. Bridge Club
16. Boiler Operator

(*a diploma is available through the Evening School and twenty-five credit courses have been offered)

Wickliffe

1. Antiques & Collectibles
2. Architectural Drafting
3. Art
4. Automotive Tune-Up
5. Boating Safety & Seamanship
6. Bookkeeping I
7. Cake Decorating
8. Ceramics
9. Christmas Crafts & Gift Wrap
10. Citizenship
11. Computer Math
12. Crocheting, Knitting, and Art Needlework
13. Dancing
14. Drafting
15. Drugs
16. Electronics - Basic
17. Electricity - Home
18. Electricity - Industrial
19. English for the Foreign Born
20. Flower Arranging
21. Fly Tying
22. German
23. Golf
24. Greek
25. Hair Styling & Grooming
26. Humanities
27. Italian
28. Karate
29. Ladies Exercise, Ballet, Jazz
30. Law Course for the Layman
31. Literature
32. Machine Shop & Shop Math
33. Oil Painting
34. Philosophy
35. Physical Fitness - Men
36. Politics
37. Red Cross - Standard First Aid
38. Sales Training-Pre-employment
39. Sewing-Beginning
40. Sewing-Intermediate
41. Shorthand-Beginning
42. Shorthand-Intermediate
43. Shorthand-Brush Up
44. Slimnastics - Women
45. Slovenian
47. Spanish - Beginning
48. Speech
49. Square Dancing
50. Typing I
51. Typing - Intermediate
52. Vocal Lessons

Willoughby-Eastlake*

1. Acrylics
2. Adult Self Improvement
3. Auto Body Repair
4. Automotive Brake & Steering Repai
5. Auto Care For Women
6. Auto Tune-Up for Men
7. Basic Seamanship and Boat Safety
8. Dance Instruction
9. Driver Training
10. French
11. Gas Engines
12. Golf
13. Sewing - Beginning
14. Sewing - Intermediate
15. Sketching
16. Slimnastics
17. Bridge
18. Building Maintenance - Women
19. Cake Decorating
20. Creative Exercise
21. Dancing - Mideastern
22. Gourmet Cooking
23. Graphoanalysis
24. Knitting - Beginning
25. Oils
26. Social Psychology I
27. Spanish
28. Stocks & Bonds
29. Study of the General Education Test
30. Water Color Painting
31. Woodworking & Cabinet Making

(*Willoughby-Eastlake schools offer an extensive program of over fifty credit courses in their evening adult educatio program.)

Lakeland Community College
Community Service Courses

Lakeland Community College has offered numerous adult (continuing) education courses since Winter Quarter, 1973. These courses are called Community Service courses by the Lakeland staff. Listed below is a list of all the Community Service courses offered by Lakeland during the last three academic years and the frequency of those offerings. Those that were successful are also indicated by an asterisk.

Course Title	Frequency of Course Offering
Handwriting Analysis*	7
Hapkido*	3
Intellectual Traditions of the West*	1
Macrame*	1
Yoga*	5
Transactional Analysis*	5
Abnormal Psychology*	3
Beginning Karate*	10
Defensive Driving*	1
Effective Publicity	1
Encounter Experience	1
Pre-Retirement Planning*	4
Women Writers in America	1
How To Make Johnny Pick Up His Things*	4
Home Decorating I*	1
Psychic Phenomena*	3
Driver Attitude*	4
Lamaze I*	19
Lamaze II*	4
Radio Seminar*	1
Hydraulics*	1
Personal Investments*	1
Perceptual Development*	2
Psychology of Weight Loss*	4
Ethics in Business & Personal Life	1
Automotive Seminar	1
Effective Study Techniques*	4
Exercise for Women*	3
Exercise for Men*	4
Conversational Greek*	4
Intermediate Karate*	4
Advanced Karate*	4
Solid State Electronics, Advanced*	1
Television Repair	1
Picker X-Ray*	2
Offenders Attitude*	8
DWI*	24
Tax & Tax Laws*	1
Puppetry Workshop	1
Calculus Refresher*	1
Jazz Arrangement*	3

Course Title	Frequency of Course Offering
Jazz Harmony*	1
Jazz Improvisation I*	2
Functional Piano*	3
Metric Systems Fundamentals*	3
Self Defense for Women*	3
Origins of the Russian State*	1
Beginning Chinese*	3
Understanding Drug Use*	2
Consumer Concerns	1
Astrology*	1
Applied Physics*	1
How To Be Effective In a Meeting	1
Conversational German*	2
What It Takes to Live With a Mate and Be Glad Of It	1
Speak Up With Confidence*	1
Intermediate Chinese*	1
Advanced Fortran*	1
Aikido*	2
Family Relations Seminar*	1
The Women, Yes	1
Great Books Discussion*	1
Advanced Metrics	1
Conversational Russian*	2
Science Fiction	1
Creative Activities for the Young Child*	2
Jack Daniels Tells It Like It Was	1
All You Wanted To Know About Children But Didn't Have the Psych to Ask	1
Russian Revolution Movements*	1
Calligraphy*	1
Maintenance Seminar*	1
Metallurgy*	1
Basic Electronics	1
Basic Electricity*	2
Quality Control*	1
Advanced Chinese*	1
Sino-Soviet Relations	1
Recent Research in Human Sex	1
Personal Communications - Women	1
Personal Communications - Women & Men	1
Hospital Management, Introduction*	1
Alcoholism	1
Engineering Materials*	1
Strength of Materials*	1
Work Measurement*	1
Industrial Costs*	1
Behaviro Modification	1
Hi-Fi Stereo	1

Two additional questions were asked of the adult education directors. The first attempted to determine if any specific topics had been requested which their school had been unable to satisfy. Below is a list of these non-credit courses.

1. Air conditioning - Laboratory Course
2. Furniture Refinishing
3. Full-time day programs (e.g. auto mecharics, machine shop)
4. Gourmet Cooking
5. Drapes and Slipcovers
6. Electronics
7. Swimming
8. Advance Sewing

In addition to these courses which offer opportunities the adult directors were asked to suggest courses which might be offered in the future. This group could suggest additional ideas for adult education directors.

1. Metrics
2. Real Estate Transactions
3. Furniture Refinishing
4. Photography
5. Income tax
6. Comparative Religion
7. Natural childbirth classes
8. "Free classes for a week or two"
9. U. S. Power Squadron Courses (Boating)
10. Large Muscle Recreation Program (Basketball, Volleyball)
11. Swimming
12. "Travel" Seminars
13. Custodial Manintenance Seminar
14. Boiler Operator (Low Pressure)

Lakeland Community College has additional Community Service classes planned for the future. Many of these will cover career related information.

Future Lakeland Community College Community Service Courses

1. Estate Planning
2. How to Run for Public Office
3. Home - Apartment Fire Prevention
4. Career Change
5. Intermediate Management Techniques in Hospitals in Other Care Centers
6. Writing to Sell
7. Leadership
8. Career Focus for Today's Woman
9. The Calm and Fury of Weather
10. Office Work Today - Some things old, some things new
11. Byzantine Period
12. Stocks and Commodity Buying
13. Theatre Dance
14. Residential Landscaping

Chapter V CAREER ASPIRATIONS OF LAKE COUNTY STUDENTS

CHAPTER HIGHLIGHTS

*This chapter describes a survey in which 44%, or 6,756, of all 9-10-11-12 grade students in Lake County public schools were contacted in May, 1974.

*Nearly half of all seniors had college plans.

*35% of all seniors planned to work full-time upon graduation.

*68% of all males and 46% of all females had part-time jobs.

*44% of all students said career planning was "very important" to them; 48% said "moderately important." Only 8% said career planning was "not important."

*College preparatory students as a group were most concerned about career planning.

*Between the tenth and eleventh grade, students show an increasing interest in career planning.

*57% of all students surveyed said they have definite career plans. This varied little by sex or grade. It did vary considerably by program; 64% of vocational, 63% of college preparatory and 41% of general program students had definite plans.

*The career selections of women were somewhat traditional with nursing, clerical work and teaching being the most popular. These three were chosen more than all other areas combined.

*The top career selections for men were engineering, skilled operation of precision equipment, agriculture and related biological work, machine work, and craftsmenship.

*There was a considerable difference in career selection when compared by school program.

*Parents had the greatest influence on the career choice of seniors (25%); school activities (5%), and counselors (3%) had the least.

*64% of seniors with definite career plans believe they had adequate career information. Overall, general students were less favorable than students in other programs.

*23% of all seniors surveyed thought that schools did not adequately prepare them to accept a job or to continue their education. When analyzed by program, 38% of industrial arts, 34% of general, 29% of home economics, 21% of vocational, 18% of business and college preparatory felt this way.

CAREER ASPIRATIONS OF LAKE COUNTY
HIGH SCHOOL STUDENTS

The most extensive segment of the Lake County Career Opportunities Study II was conducted by Sub-Committee Four, Career Aspriations. The primary data collected in this chapter, as well as Chapter VII, were the work of Sub-Committee Four. Their names and the school systems they represented are as follows:

Pat Corbett, Chairperson
Coordinator, Career Education
Kirtland Schools

Andy Buynacek, Chairman
Counseling Department
Lakeland Community College

Louis Cicek, Director
Career Education
Willoughby-Eastlake Schools

James D. Gordon
Endres, Posner and Associates, Inc.
Painesville City Schools

William Heylock, Counselor
Wickliffe Schools

Judy Nay, Coordinator
Career Education
Willoughby-Eastlake Schools

Betty Wollpert, Professor
Lakeland Community College

BACKGROUND AND SIGNIFICANCE

A study of career opportunities could hardly be complete unless it sought the opinions of the clients of the educational process. The importance students give to career planning is, therefore, an important segment of the Lake County Career Opportunities Study.

In the 1969 Lake County Career Opportunities Study, 13,000 students were contacted. One conclusion of the first study was that students expressed somewhat stereo-typed and narrow career goals. For example, females selected teaching and airline stewardess as the most frequently mentioned career choices. Another possible conclusion was that students seem to have limited career information. The selection of teaching careers as the most frequently selected career goal for all students probably means that this was one of the few occupations students had considerable contact with and information about. In short, it is likely students had limited access to a variety of career information.

In Chapter VI, the results of a similar survey is presented. That Exploring study polled over nine thousand Lake County students about the careers in which they were interested. The differences in the 1969 Career Opportunity and the Exploring studies are reviewed in Figure 6-4 and 6-5 of this report.

Most educators have reacted to the growing need for better career information in the secondary schools. One such reaction is Career Education. Since 1969, two school systems have instituted career education. Career Education is a comprehensive educational program designed to provide students with the necessary information and developmental experiences to prepare them to live and work in society. It combines the efforts of home, school and community and reaches preschool through adulthood. Career Education co-ordinators assist classroom teachers to help in career development[1] and provide some career exploration.[2]

The school systems which offer Career Education are Kirtland and Willoughby-Eastlake. Since these programs have not been operational for very long, their cumulative effect cannot be accurately measured. It is, however, a step in the direction of improved career (vocational and avocational) information and guidance. Progress indicates the growing interest of the schools in the general topic of this report.

Since 1965, numerous articles have been published on career education.[3] They provide a research and conceptual base to initiate and implement a program. Case histories of successful programs have also been published and offer a wealth of practical data.

Based on this growing concern for better career information as well as the need to question the receivers of the educational process this research survey was undertaken.

OBJECTIVES OF THE REPORT

When Sub-Committee Four embarked on their student survey, they hoped to reach the following goals:

1. To determine the extent to which students have defined their career goals.
2. To determine the specific CAREER CLUSTERS[4] to which students aspire.

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[1] See Definition of Terms, Chapter I.

[2] Ibid.

[3] An extensive bibliography is available by Sidney C. High, Jr. and Linda Hall. It is titled "Bibliography on Career Education," October, 1972. Write the Division of Vocational and Technical Education, Bureau of Adult, Vocational, and Technical Education, U.S. Office of Education, Washington, D.C. Also review the Educational Resources Information Center (ERIC), Research in Education monthly journals. Write Superintendent of Documents, U. S. Printing Office, Washington, D.C. 20402. Single copies $3.25.

[4] See Definition of Terms, Chapter I.

3. To discover the importance students give to career planning.

4. To determine student attitudes toward career counseling and related school services. (This is reported in detail in Chapter VII.)

PROCEDURES FOR COLLECTING DATA

Sub-Committee Four elected to use a research design similar to that used in the 1969 study. Specifically, two student questionnaires were developed; one for seniors and another for 9-10-11 grades (underclassmen). A sample of each is presented in the appendix. Several modifications were made, but the most significant was in the list of occupational clusters students were to select. Although the 1969 study had used a rather numerous list of occupations, it was decided to simplify the list in favor of broader career clusters. The most important single rationale for this was that there are many competency commonalities to these occupational clusters which lend themselves ideally to curriculum planning. For example, all selling and merchandising occupations have a need for broad communications skills. Therefore, students in such a curriculum should develop these competencies. There were several comprehensive lists of career clusters considered.[5] The Ohio Vocational Interest Service (OVIS) list of twenty-seven clusters was finally selected. The questionnaires were pre-tested with twenty students and then administered with a few minor changes.

During the last two weeks of May 1974, all public school systems in Lake County received questionnaires for each student in 9th-12th grades. Each respective superintendent of schools appointed a counselor or another individual for each school building who coordinated the administration of the questionnaires. In total 6,756 questionnaires from nine high schools ans six junior high schools were usable. This represented 44% (or 6,756 of 15,378) of all 9-10-11-12 grade students in the public schools during the 1973-74 school year. The results were totaled, compared, and cross-classified. A review of the findings is the substance of this chapter. The fifteen participating schools were:

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[5] Other sources of clusters considered were Educational Research Council, Kuder Preference Test, Dictionary of Occupational Titles, and Ohio's Career Education listings.

	Usable Questionnaires		
	Seniors	9-11	Total
Fairport Harbor Schools			
Harding High School	43	155	198
Kirtland Schools			
Kirtland High School	73	78	151
Madison Schools			
Madison High School	187	728	915
Mentor Schools			
Mentor High School	308	710	1018
Painesville Schools			
Harvey High School	87	548	635
Painesville Township Schools			
Riverside High School	108	589	969
J. R. Williams Junior High	--	272	
Perry Schools			
Perry High School	59	311	370
Wickliffe Schools			
Wickliffe High School	219	542	1057
Wickliffe Junior High	--	296	
Willoughby-Eastlake Schools			
South High School	141	484	1443
Eastlake Junior High	--	201	
Kennedy Junior High	--	121	
Willoughby Junior High	--	285	
Willowick Junior High	--	211	
	1225	5531	6756

LIMITATIONS

Semantics can often create a problem for non-personal survey research. Does a word mean the same to all those responding to the questionnaire? In the case of a study contacting over 6,000 people, as this one has, it is virtually impossible to be certain of word interpretation. For example, how "definite" is a definite career choice to a ninth grader; or for a senior? Do all students know the academic program in which they are enrolled? Did some industrial arts persons check general or vocational?

Closely related to the above is a second limitation of the study. The project coordinator had no control over exactly how and when the questionnaires were administered. Some schools administered them in homeroom, some in Health class, while others used English classes. Timing also affects the mood of the respondent. Will a student in the 10:00 a.m. English module be as favorable to start with as a student in a 3:00 p.m. study hall? Also, there was little direct contact with most of the people who actually gave the classes instructions for completing the questionnaire. A brief description was provided, but mostly the project co-ordinator worked through intermediaries.

A third limitation deals with the 27 selected career clusters. Again, closely related to the semantics problem mentioned above, students might have perceived some overlap in some of the cluster titles. For example, the clusters training people and teaching, counseling, and social work may seem to be the same occupational area to some. In addition, entertaining people and musical activities were checked together on a few questionnaires. On the positive side, the departure from the usual job cluster or classification system (The Exploring Survey in Chapter VI is a traditional breakdown.) may have caused the students to think through their answers more carefully than they might have with a typical job breakdown.

Lastly, one may question the validity of asking an adolescent in our culture to make a "definite career choice." One could speculate that most responses indicate a high degree of interest at best. A better description of the responses may be a "highly qualitative choice," not a "definite choice."

Overall, we believe the survey did measure the feelings and opinions of Lake County students. The impressive 44% of all students eliminates problems of sampling error.

SCHOOLS RECEIVE LOCAL DATA

For the purposes of this study, it was unnecessary to compare each individual shcool. Instead, county-wide figures were used. However, in order to provide more meaningful data each school system received a detailed breakdown of the totals by participating schools in their district. For example, Madison Schools would know how each male or female of any grade of any program answered each question. This specific local data was given to each superintendent during the week of September 23, 1974.

PRESENTATION OF THE DATA

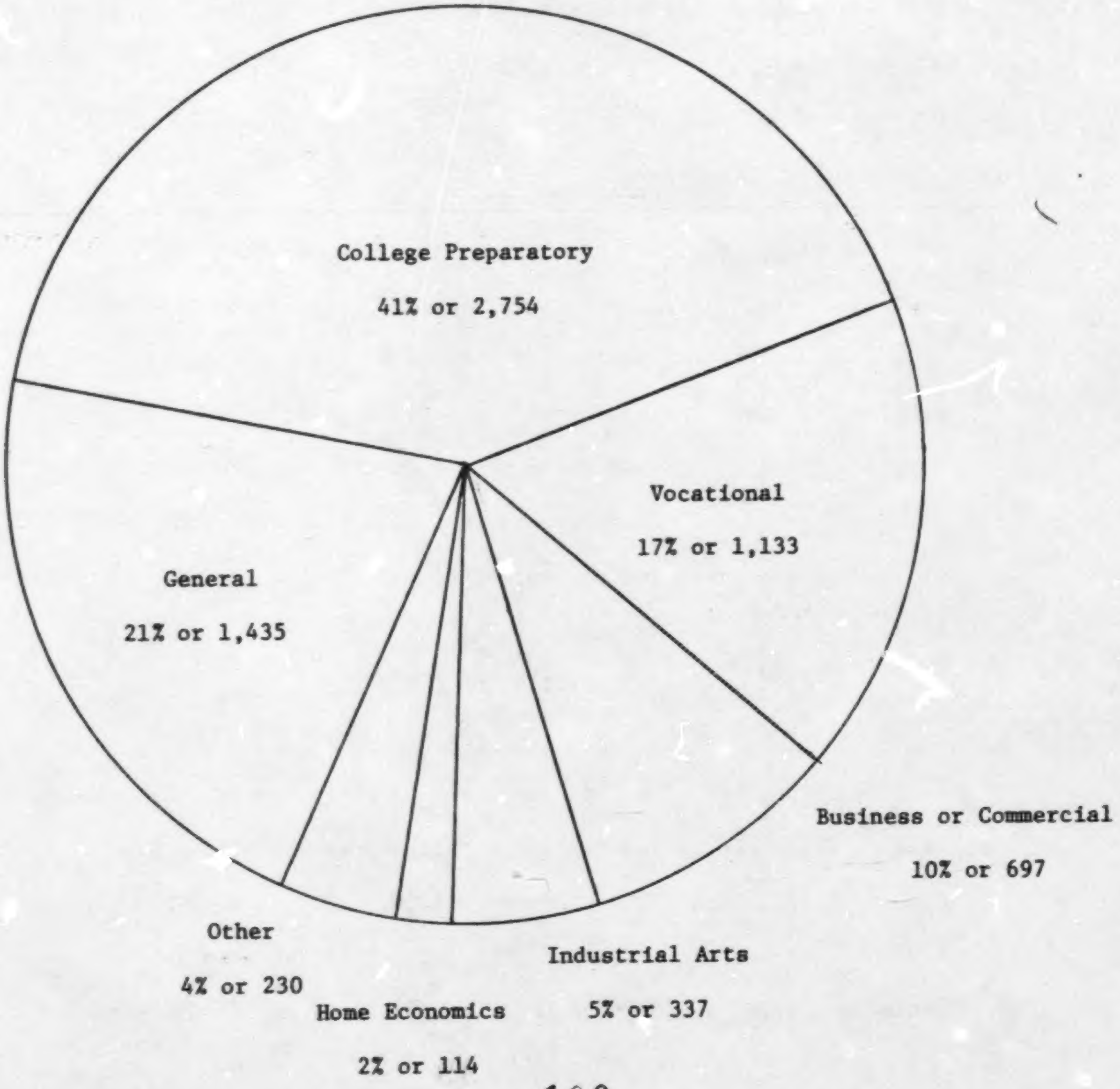
All Students

In total, 48% of all students who participated in the study were males. All students surveyed were enrolled in a public school in Lake County, Ohio. Of all the students polled, 1,992 or 30% were freshman; 1,889 or 28% were in the tenth grade; 1,645 or 24% were in the eleventh grade, and 1,225 or 18% were seniors. The program affiliations for all the students surveyed were 2,754 or 41% college preparatory, 1,435 or 21% general, 1,133 or 17% vocational, 697 or 10% business or commercial, 337 or 5% industrial arts, 114 or 2% home economics, and 230 or 4% classed as other. The pie chart in Figure 5-1 illustrates the overall program affiliation of students.

FIGURE 5-1

Academic Program Affiliation of All Students Surveyed

Total students - 100% or 6,756



Plans After Graduation

Of considerable interest to educators, parents, and industrial leaders are the plans of students immediately after high school graduation. In Lake County, most school systems conduct follow-up studies to determine this. Certain programs, such as the vocational subjects, are required to complete this type of descriptive research. In the career aspirations questionnaire, the first type of information requested was what the student planned to do on a full-time basis the first year after graduation. Figure 5-2 compares the responses by grade, while Figure 5-3 compares answers by sex and 5-4 by program.

Post-Secondary Education

Since the largest portion of students surveyed (41%) were in the college preparatory program, it is logical to look at the college plans of all respondents first. It is also of considerable interest to area colleges as well as teachers in the college preparatory programs.

Three separate choices for college training are given (#6, 7, 8 on Figures 5-2, 5-3, and 5-4). The three choices were four-year college, two-year community/junior college, and technical or business school. These three choices are subtotaled (**) on each figure.

The percentage of all students planning some form of higher education immediately after high school graduation increases steadily between the freshman and senior year (41%-42%-43%-47%) until nearly half of the graduating seniors have these plans. The percentage of each sex planning college varies at each grade level. The percentage of females who plan higher education stays remarkably close in each grade level (44%-44%-45%-44%). A smaller percentage of the men surveyed plan college at each of the underclass grades (38%-41%-42%). It is between the junior and senior year that the greatest increase for males planning post-secondary education occurred. As seniors, 51% or 295 of all males planned some form of higher education versus 44% or 287 females. In total 47% or 582 of the 1,225 seniors polled planned higher education. Coincidentally, this is the national average for the percentage of all students going on to college.[7]

An examination of college bound plans by academic program (Figure 5-4) shows that many students have collegiate plans even though they are not in the college preparatory program. The percentage of students in the first four programs with college plans in the largest programs stays remarkably similar between the 9th and 12th grade. There was a large percentage increase between the 9th and 12th grade of industrial arts and home economics students with college plans. The vocational programs presumably sent the smallest portion of their students (16%) on to college compared to other programs; college preparatory would send the most (76%). The four-year college was the most frequent choice for college preparatory seniors (55%), but this type of institution wasn't nearly as attractive to seniors in other programs. In fact, the two-year community college is the highest choice for students in every other program. But in terms of actual numbers, the college preparatory program had the largest amount of students going to a community college (108 or 20%). Overall, college preparatory had a higher number of students planning to attend a community college than all the other programs combined (108-83).

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[7] For an interesting discussion of this topic based on ability groupings, sex, and socio-economic quartiles see K. Patricia Cross, Beyond the Open Door, Jossey-Bass Inc., 1972, pp. 5-13.

Employment Plans

A student had three choices to select for employment after graduation. These were apprenticeship programs, on-the-job training programs, and working full-time without the benefit of special job training. By combining these first three categories in the first sub-total (*) in Figures 5-2, 3, and 4, an accruate reflection of immediate employment plans was possible.

Beginning in the ninth grade, 26% of 517 of all students plan to be employed full-time the first year upon graduation from high school. More males (30%) than females (22%) have this plan as freshmen. This pattern continues in the tenth grade with more females (25%) planning to be employed. In the junior year, the percentage of all students planning work increases to 30% or 493. At the same time, males planning work increases to 32% while females increase to 28%. During the senior year, females planning employment increases 7% to 35% virtually equal to males at 36%. Therefore upon graduation from high school, 35% of all 1974 seniors planned to either work full-time, to be apprentices, or to have on-the-job training.

The employment plans differ markedly when analyzed by academic program. Regardless of program, smaller percentages of students plan to work as freshmen than as seniors. The lone exception is home economics, and the relatively small number of respondents in this category (14 seniors) causes the sample percentage to be suspect.

In the senior classification, the vocational programs had the highest percentage (63%) and the second highest number of students (135) who have immediate employment plans. The general program seniors had

FIGURE 5-2

Plans For the First Year After High School Graduation - By Grade

First Year Plans	9th Grade		10th Grade		11th Grade		12th Grade	
1. Apprenticeship to learn a trade	76	4%	57	3%	52	3%	31	2%
2. On-the-job training	100	5	81	4	91	6	66	5
3. Work full time	341	17	356	19	350	21	337	28
Subtotal*	517	26%	494	26%	493	30%	434	35%
4. Enter military service	122	6	109	6	62	4	41	3
5. Full-time housewife	27	1	18	1	33	2	19	2
6. Attend a four-year college	548	28	503	27	416	25	348	28
7. Attend a two-year community college	180	9	217	11	234	14	192	16
8. Attend a technical or or business school	87	4	79	4	63	4	35	3
Subtotal**	815	41%	799	42%	713	43%	575	47%
9. Don't know	388	19	346	18	236	14	73	6
10. Other	123	7	128	7	108	7	83	7
Totals	1992	100%	1889	100%	1645	100%	1225	100%

*Employment plans (1, 2, 3)

**College plans (6, 7, 8)

FIGURE 5-3

Plans For the First Year After High School Graduation - By Sex

First Year Plans	9th Grade				10th Grade				11th Grade				12th Grade			
	M	%	F	%	M	%	F	%	M	%	F	%	M	%	F	%
1. Apprenticeship to learn a trade	60	6	15	2	40	4	17	2	46	6	6	1	29	5	2	
2. On-the-job training	66	7	34	3	44	5	37	4	63	8	28	3	47	8	19	3
3. Work full time	166	17	174	17	175	19	180	19	129	18	221	24	135	23	200	32
Subtotal*	192	30%	223	22%	259	28%	234	25%	238	32%	255	28%	211	36%	221	35%
4. Enter military service	89	9	31	3	88	9	21	2	42	6	20	2	30	5	11	3
5. Full-time housewife	0	0	26	3	0	0	17	2	0	0	33	4	0	0	19	3
6. Attend a four-year college	261	27	285	28	272	29	230	24	198	27	217	24	186	32	160	25
7. Attend a two-year community college	65	7	115	11	79	8	138	15	80	11	154	17	86	15	106	17
8. Attend a technical or business school	40	4	47	5	34	4	45	5	26	4	37	4	23	4	11	2
Subtotal**	376	38%	447	44%	385	41%	413	44%	304	42%	408	45%	295	51%	287	44%
9. Don't know	167	17	220	22	154	17	192	20	101	14	134	15	29	5	44	7
10. Other	47	5	64	6	48	5	70	7	48	6	52	6	20	3	53	8
Totals	964	99%	1018	100%	936	100%	950	100%	737	100%	906	100%	589	100%	631	100%

*Employment plans (1, 2, 3)

**College Plans (6, 7, 8)

FIGURE 5-4

Plans For the First Year After Graduation

A Comparison by Program of Freshmen and Seniors

First Year Plans	College Prep		General		Vocational		Business		Industrial Arts		Home Economics	
	9th	12th	9th	12th	9th	12th	9th	12th	9th	12th	9th	12th
1. Apprenticeship to learn a trade	1%	1%	3%	4%	8%	5%	1%	3%	17%	14%	2%	0%
2. On-the-job training	1	1	4	7	11	12	7	8	13	10	7	0
3. Work full time	6	11	25	37	31	46	24	48	20	34	31	29
Subtotal*	8%	12%	32%	48%	50%	63%	32%	59%	50%	58%	40%	29%
4. Enter military service	4	2	9	4	8	6	2	3	11	10	4	0
5. Full-time housewife	0	0	1	2	1	3	3	5	0	0	16	14
6. Attend a four-year college	57	55	9	12	5	5	7	3	8	0	9	7
7. Attend a two-year community college	13	20	11	14	5	7	9	15	2	17	4	29
8. Attend a technical or business school	2	1	4	3	5	4	13	5	5	10	0	0
Subtotal**	72%	76%	24%	29%	15%	16%	29%	23%	15%	27%	13%	36%
9. Don't know	11	3	33	10	20	6	26	7	22	0	18	14
10. Other	5	7	1	7	6	6	8	3	2	5	9	7

*Employment plans (1, 2, 3)

**College plans (6, 7, 8)

the fourth highest percentage (48%), but the highest number of graduates (140) planning immediate employment. The college preparatory program had the lowest percentage (12%) and the third highest number (70). The business or commercial program had the second highest percentage (59%) and the fourth highest number (65).

Military Service and Homemaking

Military service shows a decline in percentage of interest for all students between the freshman and senior years (6% to 3%). Not unexpectedly, the military attracts interest primarily from males who are underclassmen. However, the percentage of interested senior males (5%) and females (3%) is closer than at any other grade. When compared to others, the industrial arts programs send the highest percentage of its students to the military (10%).

Some females at each grade level plan to be housewives (9th-1%, 10th-1%, 11th-2%, 12th-2%) on an exclusive basis after graduation.

Students Without Plans

The percentage of students who "don't know" what they will be doing the first year after school declines steadily between the 9th and 12th grades (19%-18%-14%-6%). However, 7% or 85 high school seniors in May 1974 did not know what they intended to do during the 1974-75 academic year. The percentage of males and females with no plans was very similar, even though a greater percentage of females at every grade level had no plans for the first year after graduation.

A comparison of the programs of students who did not know what they would do immediately after graduation is interesting. At both the 9th and 12th grade levels, the general program had the highest number o students (131 and 29 respectively) and percentage (33% and 7%) who checked "don't know." The second highest number of "don't knows" a each level came from the college preparatory program.

At each grade level, 7% of the students surveyed had plans whi did not coincide with the choices available. Typical of the unconv plans and responses of seniors were "I plan to travel for a year," "I plan to work full time *and* go to school." More in-depth researc into this area seems advisable.

Part-Time Employment of Students

Part-time employment can be an outstanding source of career inf and development. A part-time job can be an exploratory experience can signal opportunity or can form a base of experience to make a mo precise career selection. In recognition of this, many schools in L County offer work experience and co-operative occupational educatio or "co-op" programs as they are usually called. These programs vary considerably in intent. Work experience programs have their primary purposes either to prevent students from "dropping out" of high scho or to broaden "real" life experience. They hope that some type of j experience can help the student adjust to his environment.[9]

Contrastingly, co-operative occupational education programs pro a variety of learning experiences correlated with classroom activiti leading to growth and advancement on the job. Students are paid for their work and job rotation is a common method of such programs. Ex of co-operative programs in Lake County are distributive education, operative office education, and diversified co-operative training.

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[8] See Definition of Terms, Chapter I.

[9] Ibid. A discussion of the differences in co-operative and wor experience programs is presented.

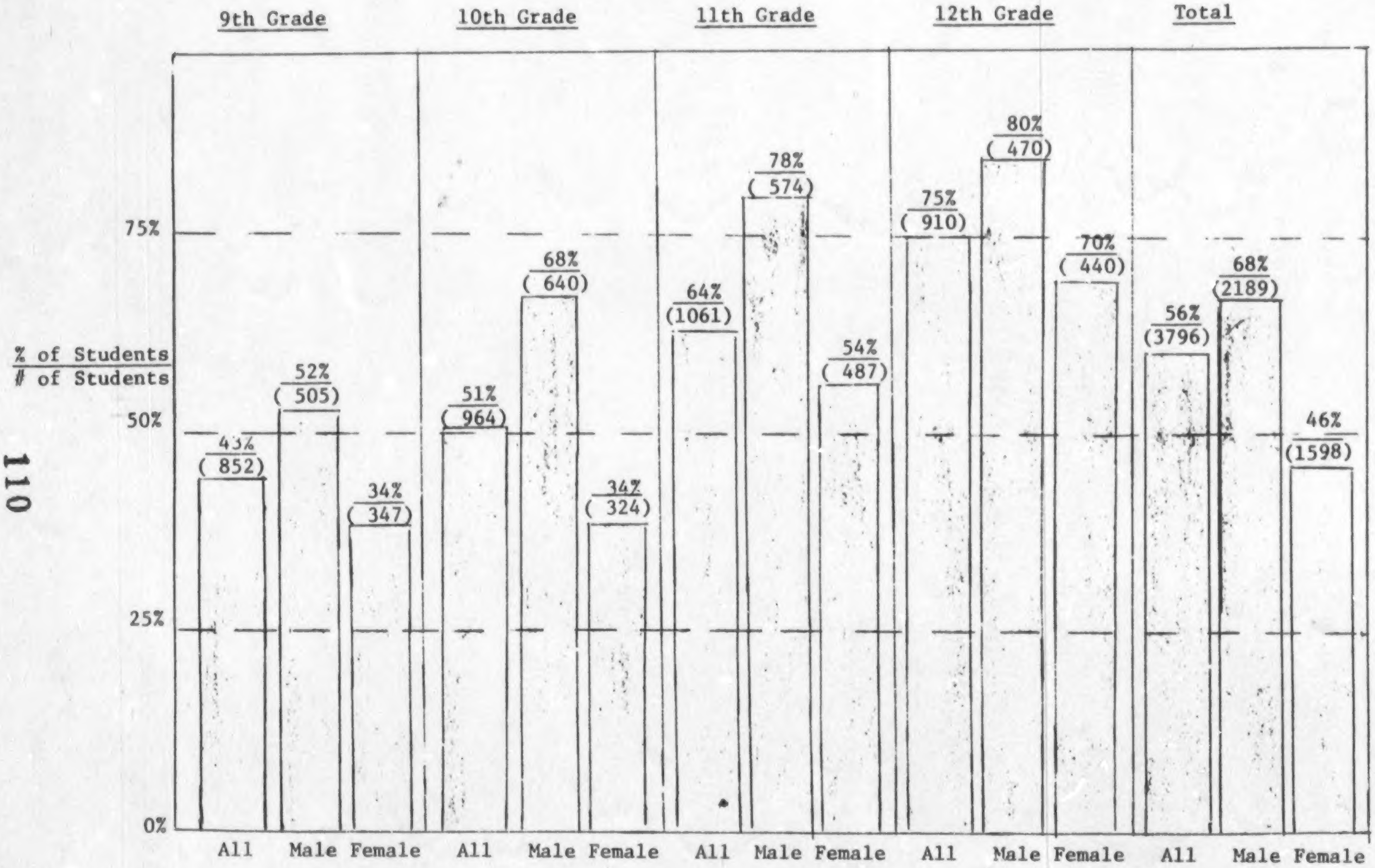
Lakeland Community College, the retailing, business management, and engineering programs have a co-operative format. Many students are enrolled in these programs locally (See Chapter IV.) and nationally.

Regardless of format, credit or non-credit, co-operative or work experience, school-connected or not, part-time employment is a significant source of career information. A survey question determined how many students had part-time jobs. Figure 5-5 illustrates the findings.

More males are employed as a percentage at each grade level (52%-68%-78%-80%) than females (34%-34%-54%-70%). Males dominate in actual numbers employed at each grade level as well. There was a percentage difference of males and females at each grade level. There was a 18% difference in the 9th grade, 34% in the 10th, and 24% in the 11th grade. Females close the gap to a 10% difference in the senior year. In total, 56% or 3,796 of the students surveyed were employed part time. Overall, 68% or 2,189 of males were employed and 46% or 1,598 of all females were employed.

FIGURE 5-5

Students With Part-Time Jobs by Grade and Sex



Importance of Career Planning

An assumption throughout this report has been that students need and want career planning information. To validate this assumption, students were asked to what degree career planning was important to them. The results are presented in Figure 5-6.

FIGURE 5-6
Importance of Career Planning by Grade and Program

Program	Importance		9th	10th	11th	12th
College Preparatory	Not		8%	4%	4%	9%
	Moderate		52	51	39	51
	Very		40	45	56	39
General	Not		13	11	12	16
	Moderate		59	60	49	54
	Very		27	28	37	30
Vocational	Not		12	7	7	16
	Moderate		47	44	39	63
	Very		41	50	53	21
Commercial or Business	Not		9	6	5	13
	Moderate		63	60	45	67
	Very		27	34	50	20
Industrial Arts	Not		7	15	12	28
	Moderate		57	39	51	52
	Very		35	44	36	21
Home Economics	Not		18	29	10	29
	Moderate		47	56	57	43
	Very		33	12	33	29
All Students	Not	%	10%	8%	7%	8%
		#	196	144	115	98
	Moderate	%	54%	52%	43%	38%
		#	1077	974	710	462
	Very	%	36%	40%	50%	54%
		#	709	761	811	659

Overall, 44% of the students selected "very important," 48% selected "moderately important," and 8% selected "not important." The percentage of total students selecting "very important" increases consistently by grade level (36%-40%-50%-54%) with the greatest rise between 10th and 11th grade. At the same time, the percentage of those selecting "moderately important" decreases (54%-52%-43%-38%), while those selecting "not important" remains at somewhat the same level (10%-8%-7%-8%).

College preparatory students as a group were most concerned about career planning. Overall, they had the lowest percentage of responses in "not important." Following them in rank order were commercial or business, vocational, business, general, industrial arts, and home economics programs.

The degree of interest might best be gauged by the responses to the "very important" choice. As a percentage of the total for each program, the rankings change slightly. College preparatory was still the highest rank, but vocational moves to second replacing commercial/business. Following that comes industrial arts, general, and home economics.

For every program, except industrial arts, there is a considerable increase in the "very important" category between the tenth and eleventh grades. For vocational students, the significant increase is between the ninth and tenth grades. Perhaps at this time, the majority of students might be receptive for career guidance and information.

Definiteness of Career Plans of Students

To determine student interest in various careers, Sub-Committee Four had two choices. The committee could have all students indicate their career interests regardless of the degree of commitment, or firstly try to find out how serious were the students' plans. The former was essentially the research tactic of the Exploror Career Interest Survey reported in detail in Chapter VI. The decision was made to determine those career areas of considerable interest to students. Therefore, question 14 on the survey asked "Do you have definite career plans?" If a student checked "Yes," he was to continue on reacting to three more questions including checking the career cluster which most closely resembled his chosen career field. If the student responded "No, I do not have definite career plans," he was to stop. Overall, 57% or 3,830 of the students surveyed said "Yes," they had definite career plans. A surprisingly similar percentage of students at each grade level responded yes (56%-55%-57%-60%). Likewise, there was little difference in responses of males and females by grade. More females seem to have decided earlier, however. In total, 55% of males and 60% of females indicated definite career plans. Figure 5-7 presents the findings.

An analysis of the "definite career plans" by academic program and grade is revealing as Figure 5-8 shows. Overall, the programs having the highest percentage of students with definite career plans are vocational (64%) and college preparatory (63%). The next percentage is the general program (41%). In terms of numbers of students without definite plans, college preparatory is first (1,748) while home economics is last (56).

The Specific Career Choices

Overall, 57% or 3,823 of the students questioned said they had definite career plans. These students were then asked to select from a list of 27 career clusters the occupational area which most closely approximated their chosen field. For all students, the five most

FIGURE 5-7
The Definiteness of Student Career Plans by Grade and Sex

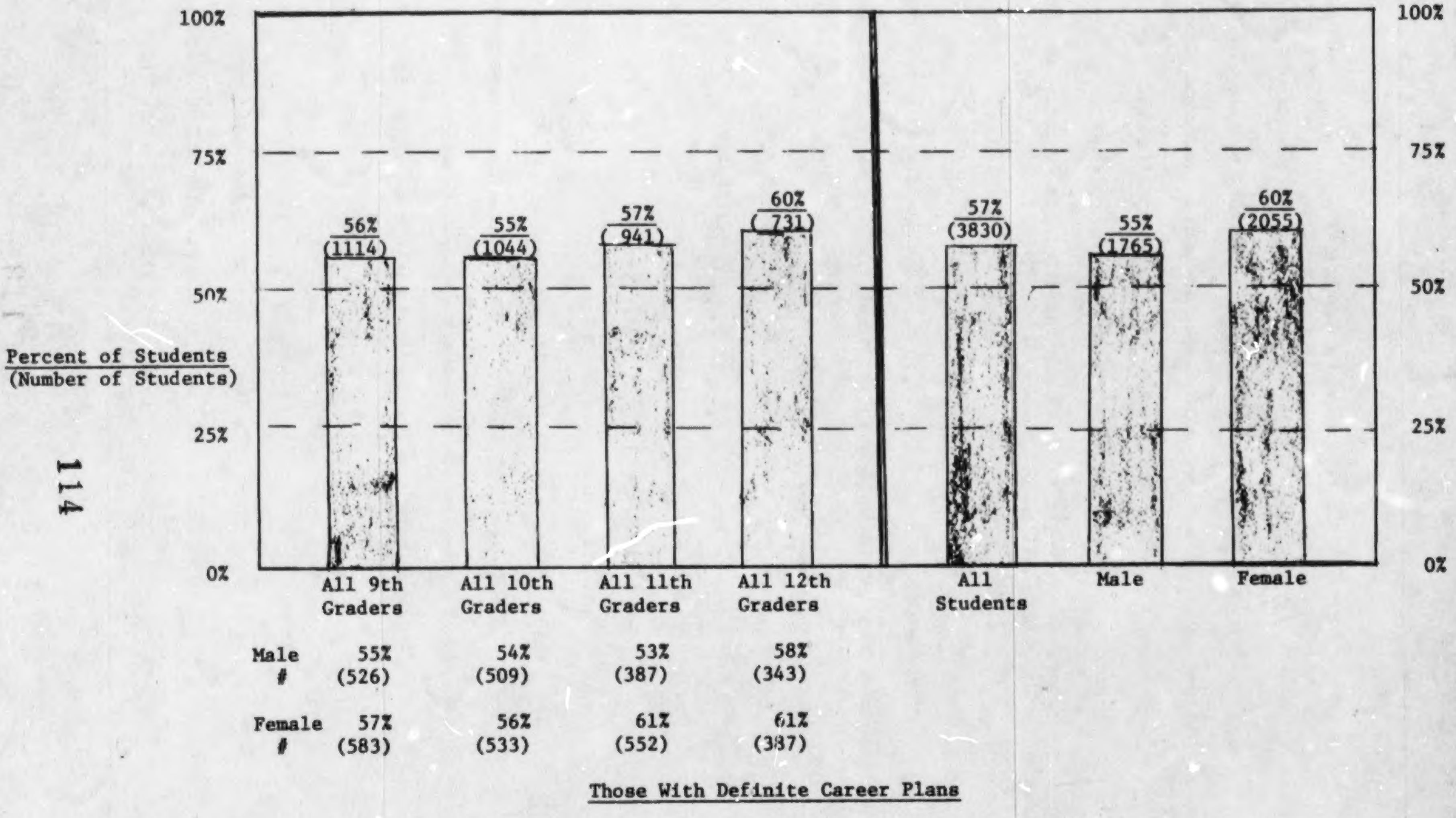


FIGURE 5-8

The Definiteness of Student Career Plans by Academic Program and Grade

Program (Ranked by total enrollment in each program)	9th Grade		10th Grade		11th Grade		12th Grade		All Students	
	#	%*	#	%*	#	%*	#	%*	#	%*
1. College Preparatory	507	63%	442	59%	436	66%	363	68%	1748	63%
2. General	156	40	159	39	138	40	136	46	589	41
3. Vocational	189	60	224	73	180	60	134	62	727	64
4. Commercial or Business (other than COE or IBOE)	101	50	101	53	107	55	64	58	373	48
5. Industrial Arts	74	56	48	45	38	55	15	52	175	52
6. Home Economics	25	56	15	44	11	52	5	36	56	49
7. Other	62	62	55	61	27	61	11	61	155	63
Total Definite Career Plans	1114	56%	1044	55%	937	57%	728	59%	3823	57%
Total Students Surveyed (by grade)	1992	100%	1889	100%	1645	100%	1225	100%	6751	99%

* Program Enrollment Percentages

Those With Definite Career Plans

frequently selected career clusters were nursing and related technical work, clerical work, engineering and related technical work, teaching/counseling/social work, and medical work/doctor. Figure 5-9 lists in rank order the career clusters most frequently cited by all students, seniors, and underclassmen (9-10-11 grades) combined.

The use of a relatively brief list of career clusters seems basically defensible because of the lack of specificity of most students' career plans. For example, the student may have a general idea that business administration is what he wants. However, it may be difficult to narrow his choice to such specific jobs as market researcher, investment consultant, etc. In addition, it is probably easier to set up curricula designed for a broader range of jobs. Schools can, therefore, concentrate on subject matter commonalities which can be more efficient.

A more detailed explanation of each career cluster can be found on the sample questionnaire in the appendix.

An examination of the selections of the two sexes is essential to this report. The analysis of the ten most frequently selected career clusters is the subject of Figures 5-10 (male) and 5-11 (female). The rankings were further arranged for the grade level of respondents.

Career Selections of Males

For males, engineering and related technical work was the highest ranked career cluster for each grade. The ninth, eleventh, and twelfth grade men cited the career cluster at least twice as frequently as the cluster ranked second. In those same three grades, there was a larger numeric difference in the first and second rankings than between the second and tenth.

FIGURE 5-9

Ranking of Career Clusters Selected for All Students

Career Cluster	All Students			Seniors			Underclassmen		
	Rank	#	%	Rank	#	%	Rank	#	%
Nursing and Related Technical Work	1	392	5.8	1	77	6.0	1	315	6
Clerical Work	2	379	5.6	2	75	6.0	2	304	5
Engineering and Related Technical Work	3	352	5.2	3	72	6.0	3	280	5
Teaching, Counseling, and Social Work	4	333	4.9	4	67	5.0	4	266	5
Medical Work/Doctor	5	254	3.8	6	46	4.0	5	208	4
Artistic Work	6	189	2.8	7	35	3.0	6	154	3
Skilled Operation and Repair	7	177	2.6	9	28	2.0	7	149	3
Caring for People or Animals	8	174	2.5	11	26	2.0	8	148	3
Number Work	9	155	2.3	5	48	4.0	13	107	2
Agriculture and Related Biological Work	10	154	2.3	8	29	2.0	9	125	2
Legal Work	11	143	2.1	11	26	2.0	10	117	2
Machine Work	12	132	2.0	16	18	1.0	12	114	2
Serving Personal Needs of People	14	127	1.7	9	28	2.0	14	89	2
Musical Activities	15	106	1.6	15	21	2.0	15	85	2
Communications Work	16	98	1.5	14	24	2.0	16	74	1
Providing Skilled Service	17	88	1.3	17	17	1.0	17	71	1

Managerial Work	18	76	1.1	11	26	2.0	18	50	1
Entertaining People	19	52	.5	22	6	.5	19	46	1
Manual Work	20	50	.7	24	5	.4	20	45	1
Writing	21	46	.7	21	8	.6	22	38	1
Training People	22	45	.7	22	6	.5	21	39	1
Waiting on Customers	23	40	.6	20	9	.7	23	31	1
Selling and Merchandising Work	24	39	.6	19	13	1.0	24	26	
Promotional Activities	25	14	.2	25	2	.2	25	12	
Appraisal and Evaluation	26	9	.1	27	1	.1	26	8	
Inspecting	27	7	.1	26	1	.1	27	6	

FIGURE 5-10

Male Career Selections by Grade

ank	9th Grade	10th Grade	11th Grade	12th Grade
1.	Engineering & Tech Work (105)	Engineering & Tech Work (92)	Engineering & Tech Work (66)	Engineering & Tech Work (6
2.	Craftsmanship (56)	Skilled Operation (64)	Craftsmanship (33)	Number Work (31)
3.	Skilled Operation (55)	Medical Work/Doctor (40)	Agriculture (28)	Artistic Work (31)
4.	Machine Work (54)	Machine Work (37)	Skilled Operation (25)	Skilled Operation (25)
5.	Medical Work/Doctor (39)	Agriculture (34)	Number Work (23)	Managerial Work (24)
6.	Agriculture (28)	Legal Work (28)	Medical Work/Doctor (22)	Agriculture (23)
7.	Legal Work (22)	Craftsmanship (21)	Machine Work (19)	Machine Work (18)
8.	Musical Activities (17)	Number Work (20)	Teaching and Social Work (19)	Communications (16)
9.	Artistic Work (16)	Artistic Work (18)	Communications (17)	Legal Work (15)
10.	Teaching and Social Work (16)	Teaching and Social Work (17)	Managerial Work (13)	Craftsmanship (15)

In terms of the ten most frequently cited clusters at each grade level, those careers ranked were engineering (1-1-1-1),[10] skilled operation of precision equipment (3-2-4-4), agriculture and related biological work (6-5-3-6), machine work (4-4-7-7), and craftsmanship (2-7-2-10). Those career clusters mentioned in the first ten for three of the grades were number work (0-8-5-2),[11] artistic work (9-9-0-3), and legal work (7-6-0-9). The number work cluster consistently rose in the ranking between ninth and twelfth grade. Two careers were mentioned twice in the first ten. They were managerial work (0-0-10-5) and communications (0-0-9-8). Managerial work increased in rank considerably between the ninth and twelfth grade.

Career Selections of Females

There was remarkable consistency from grade to grade in the responses of females, much more so than for males. Women mentioned nine of the same career clusters each year, another three times, and one cluster a single time. The first three most frequently cited clusters were the same each year. In addition, there was a large numeric gap between the third and fourth ranked choices each year. The first three career cluster choices for females were nursing and related technical work (1-2-2-1), clerical work (2-1-1-2), and teaching, counseling, and social work (3-3-3-3). It should be noted that these three clusters represent the somewhat traditional careers for women.

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[10] Henceforth to refer to the position of rank for each grade level (9-10-11-12) in ascending order.

[11] A zero means the career cluster was not ranked in the first ten for that year.

FIGURE 5-11

Female Career Selections by Grade

Rank	9th Grade	10th Grade	11th Grade	12th Grade
1.	Nursing (125)	Clerical Work (88)	Clerical Work (118)	Nursing (76)
2.	Clerical Work (92)	Nursing (81)	Nursing (96)	Clerical Work (74)
3.	Teaching and Social Work (67)	Teaching and Social Work (65)	Teaching and Social Work (81)	Teaching & Social Work (55)
4.	Caring for People/Animals (51)	Artistic Work (44)	Caring for People/Animals (38)	Caring for People/Animals(2
5.	Medical Work/Doctor (37)	Medical Work/Doctor (40)	Artistic Work (33)	Artistic Work (22)
6.	Artistic Work (31)	Caring for People/Animals (39)	Medical Work/Doctor (30)	Number Work (17)
7.	Serving Personal Needs (22)	Providing Skilled Service (24)	Serving Personal Needs (20)	Providing Skilled Service(1
8.	Legal Work (20)	Number Work (23)	Providing Skilled Service (18)	Medical Work/Doctor (15)
9.	Musical Activities (19)	Serving Personal Needs (19)	Legal Work (17)	Serving Personal Needs (13)
10.	Providing Skilled Service (19)	Legal Work (16)	Number Work (17)	Legal Work (11)

The remainder of the careers cited were caring for people or anim (4-6-4-4), medical work/doctor (5-5-6-8), artistic work (6-4-5-5), serving the needs of people (7-9-7-9), legal work (8-10-9-10), and providing a skilled service, which includes beautician and hair stylis (10-7-8-7). The number work cluster was listed three times in the fir ten (0-8-10-6). Musical activities was ranked ninth by the 9th grade females questioned.

When we compare the eleven careers most frequently cited by female with the same list for males, we find little overlap. In terms of the top ten rankings of any grade, males selected only five of the same clusters that females favored. Females picked six choices that men did not. Males selected six that females did not. Most importantly, there was no overlap in any of the four top ranked jobs for either sex, and these four career clusters accounted for well over half of the responde for both sexes.

Career Selections by Program

Some of the most interesting results in the survey were the career cluster selections categorized by the students' academic program and grade. Figures 5-11 to 5-16 show these comparisons by the six academic programs called for in the study. The six programs are presented in th order of their total sample enrollment. College preparatory comprised the largest single group of respondents, while home economics had the smallest.

The college preparatory program students totaled 2,753 with 1,748 or 64% having definite career plans. These students have remarkably consistent career plans at each grade level. Figure 5-12 shows that th

FIGURE 5-12
Career Selections

College Preparatory: 2,753 were following this program, and 1,748 (64%) had definite career plans.
M = 1,377, F = 1,370

Rank	9th Grade	10th Grade	11th Grade	12th Grade
1.	Nursing (78)	Medical Work/Doctor (66)	Teaching & Social Work (77)	Nursing (57)
2.	Medical Work/Doctor (66)	Teaching & Social Work (63)	Nursing (71)	Teaching & Social Work (53)
3.	Engineering & Tech Work (64)	Nursing (62)	Medical Work/Doctor (46)	Medical Work/Doctor (42)
4.	Teaching & Social Work (64)	Engineering & Tech Work (48)	Engineering & Tech Work (44)	Engineering & Tech Work (39)
5.	Legal Work (36)	Legal Work (36)	Legal Work (24)	
6.	Caring for People/Animals (28)	Agriculture (27)	Agriculture (23)	Number Work (25)
7.	Agriculture (28)	Artistic Work (17)	Number Work (22)	Legal Work (18)
8.	Artistic Work (19)	Number Work (17)	Caring for People/Animals (20)	Agriculture (15)
9.	Musical Activities (18)	Communications (13)	Communications (16)	Artistic Work (14)
10.	Skilled Operation (11)	Musical Activities (11)	Artistic Work (14)	Managerial Work (11)
Total in Program	800	754	662	537
Males	399* (50%)	385* (51%)	309* (47%)	284* (53%)
Females	399 (50%)	368 (49%)	351 (53%)	252 (47%)
Those with definite career plans	507 (63%)	442 (59%)	436 (66%)	363 (68%)

*The total males and females do not equal the program total because of omitted responses under sex.

FIGURE 5-13
Career Selection

General: 1,443 were following this program, and 589 (41%) had definite career plans.
M = 705, F = 736

Rank	9th Grade	10th Grade	11th Grade	12th Grade
1.	Caring for People/Animals (14)	Caring for People/Animals (15)	Nursing (14)	Artistic Work (14)
2.	Nursing (13)	Artistic Work (13)	Caring for People/Animals (13)	Engineering & Tech Work (13)
3.	Clerical Work (11)	Skilled Operation (13)	Artistic Work (10)	Nursing (11)
4.	Teaching & Scoial Work (11)	Teaching & Social Work (10)	Teaching & Social Work (10)	Serving Personal Needs (10_
5.	Craftsmanship (10)	Engineering & Tech Work (9)	Serving Personal Needs (9)	Skilled Operation (8)
6.	Machine Work (9)	Agriculture (9)	Communications (8)	Managerial Work (8)
7.	Skilled Operation (9)	Clerical Work (9)	Musical Activities (7)	Communications (7)
8.	Serving Personal Needs (8)	Serving Personal Needs (8)	Agriculture (7)	Caring for People/Animals (6
9.	Communications (7)	Medical Work/Doctor (7)	Clerical Work (7)	Machine Work (6)
10.	Engineering & Tech Work (7)	Communications (7)	Craftsmanship (7)	Craftsmanship (6)
Total in program	394	407	348	294
Males	195 (49%)	195 (48%)	161 (46%)	154* (52%)
Females	199 (51%)	212 (52%)	187 (54%)	138 (48%)
Those with definite career plans	156 (40%)	159 (39%)	138 (40%)	136 (46%)

*The total males and females do not equal the program total because of omitted responses under sex.

FIGURE 5-14
Career Selections

Vocational: 1,132 were following this program, and 727 (64%) had definite career plans.
M = 531, F = 585

Rank	9th Grade	10th Grade	11th Grade	12th Grade
1.	Skilled Operation (23)	Skilled Operation (29)	Clerical Work (37)	Clerical Work (26)
2.	Machine Work (22)	Clerical Work (26)	Engineering & Tech Work (17)	Engineering & Tech Work (14)
3.	Nursing (21)	Engineering & Tech Work (22)	Providing Skilled Service(16)	Providing Skilled Service (12)
4.	Engineering & Tech Work (20)	Machine Work (21)	Craftsmanship (13)	Skilled Operation (10)
5.	Craftsmanship (16)	Providing Skilled Service(20)	Machine Work (12)	Number Work (10)
6.	Providing Skilled Service (13)	Nursing (15)	Nursing (10)	Machine Work (6)
7.	Clerical Work (11)	Number Work (15)	Teaching & Social Work (8)	Teaching & Social Work (7)
8.	Artistic Work (10)	Caring for People/Animals(13)	Artistic Work (7)	Craftsmanship (6)
9.	Caring for People/Animals (8)	Craftsmanship (11)	Number Work (7)	Nursing (5)
10.	Number Work (6)	Artistic Work (10)	Manual Work (6)	Selling & Merchandising (5)
Total in program	313	305	298	216
Males	137* (46%)	162* (53%)	137 (46%)	95 (44%)
Females	161 (54%)	142 (47%)	161 (54%)	121 (56%)
Those with definite career plans	189 (60%)	224 (73%)	180 (60%)	134 (62%)

*The total males and females do not equal the program total because of omitted responses under sex.

FIGURE 5-15
Career Selections

Commerical or Business: 698 were following this program, and 373 (53%) had definite career plans.
M = 142, F = 550

Rank	9th Grade	10th Grade	11th Grade	12th Grade
1.	Clerical Work (55)	Clerical Work (42)	Clerical Work (65)	Clerical Work (34)
2.	Artistic Work (6)	Number Work (8)	Number Work (7)	Number Work (6)
3.	Serving Personal Needs (6)	Artistic Work (7)	Serving Personal Needs (5)	Nursing (3)
4.	Number Work (4)	Skilled Operation (6)	Selling & Merchandising (4)	Legal Work (3)
5.	Managerial Work (4)	Engineering & Tech Work (5)	Managerial Work (4)	Caring for People/Animals (2)
6.	Communications (3)	Managerial Work (5)	Nursing (3)	
7.	Machine Work (3)	Serving Personal Needs (4)	Artistic Work (2)	(Thirteen clusters had one response each.)
8.	Waiting on Customers (3)	Entertaining People (3)	Legal Work (2)	
9.	Caring for People/Animals (2)	Selling & Merchandising (3)	Engineering & Tech Work (2)	
10.	Musical Activities (2)	Agriculture (2)	Teaching & Social Work (2)	
Total in program	204	191	193	110
Males	32* (16%)	49 (26%)	43 (22%)	18* (16%)
Females	167 (83%)	142 (74%)	150 (78%)	91 (83%)
Those with definite career plans	101 (50%)	101 (53%)	107 (55%)	64 (58%)

*The total males and females do not equal the program total becuase of omitted responses under sex.

FIGURE 5-16

Career Selections

Industrial Arts: 337 were following this program and 175 (52%) had definite career plans.
M = 313, F = 22

Rank	9th Grade	10th Grade	11th Grade	12th Grade
1.	Craftsmanship (21)	Engineering & Tech Work (12)	Craftsmanship (8)	Engineering & Tech Work (5)
2.	Machine Work (14)	Skilled Operation (8)	Engineering & Tech Work (5)	Machine Work (2)
3.	Engineering & Tech Work (12)	Machine Work (6)	Artistic Work (4)	Caring, Musical, Artistic, Number, Agriculture, Manual, Craftsmanship, Skilled Operation, and Serving Personal Needs all at: (1)
4.	Skilled Operation (8)	Manual Work (5)	Medical Work/Doctor (3)	
5.	Medical, Musical, Agriculture all at (2)	Artistic (4)	Caring, Musical, Manual, and Teaching all at (2)	
Total in program	133	106	69	29
Males	127* (96%)	96 (91%)	61 (88%)	29 (100%)
Females	4 (3%)	10 (9%)	8 (12%)	0 (0%)
Those with definite career plans	74 (56%)	48 (45%)	38 (55%)	15 (52%)

*The total males and females do not equal the program total because of omitted responses under sex.

FIGURE 5-17
Career Selections

Home Economics: 114 were following this program, and 56 (49%) had definite career plans.
M = 5, F = 108

Rank	9th Grade	10th Grade	11th Grade	12th Grade
1.	Caring for People/Animals (4)	Artistic Work (3)	Caring for People/Animals (3)	Caring for People/Animals (1)
2.	Providing Skilled Service (4)	Teaching & Social Work (2)	Teaching & Social Work (2)	Promotional Activities (1)
3.	Medical Work/Doctor (2)	Entertaining, Engineering, Machine, Providing Skilled Service, Training, and Waiting on Customers all at: (1)	Nursing, Agriculture, Serving Personal Needs, Providing Skilled Service, Waiting on Customers all at: (1)	Clerical Work (1)
4.	Serving Personal Needs (2)			Serving Personal Needs (1)
5.	Waiting on Customers (2)			Providing Skilled Service
Total in program	45	34	21	14
Males	2* (4%)	3 (9%)	0 (0%)	0 (0%)
Females	42 (93%)	31 (91%)	21 (100%)	14 (100%)
Those with definite career plans	25 (56%)	15 (44%)	11 (52%)	5 (36%)

*The total males and females do not equal the program total because of omitted responses under sex.

first four most frequently cited careers for each grade are the same. Nursing (1-3-2-1),[12] teaching/counselor/social work (4-1-1-2), medical work/doctor (2-1-3-3), and engineering and related technical work (3-4-4-5) are these four. The other favorites of college preparatory students were legal work (5-5-5-7), agriculture (7-6-6-8), number work (0-8-7-6), and artistic work (8-7-10-9). Only twelve career clusters were mentioned by 9-10-11-12 grade college preparatory students.

The 1,443 students in the general program has considerable variance in year-to-year cluster rankings (Figure 5-13). They also had the lowest percentage of students (41%) with definite career plans. The first six career cluster selections for seniors did not follow a pattern of consistency as did the college preparatory student responses. The first six clusters for senior general program students were artistic work (0-2-3-1), engineering and related technical work (10-5-0-2), nursing (2-0-1-3), serving personal needs (8-8-5-4), skilled operation of precision equipment (7-3-0-5), and managerial work (0-0-0-6). In addition, 9-10-11-12 grade general program students listed five career clusters that college preparatory students did not mention.

Vocational students polled equalled 1,134 with 727 or 64% having definite career plans. The students in vocational programs selected the following career clusters most frequently: Clerical work (7-2-1-1), engineering and related technical work (4-2-2-1), providing a skilled service (6-4-3-3), skilled operation of precision equipment (1-1-0-4), number work (10-7-9-5), machine work (2-4-3-7), craftsmanship (5-9-4-9), and nursing (3-6-6-9). Two career areas were mentioned less frequently in the top ten, teaching/counseling/social work (0-0-7-7) and selling and merchandising (0-0-0-10). Vocational students only selected one career not mentioned by college preparatory or general students. Figure 5-14 reviews the findings.

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[12] Henceforth refer to the position of rank for each grade level 9-10-11-12 in that order. A zero means the career cluster was not ranked in the first ten for that year.

Commercial or business students surveyed totaled 698 with 373 or 53% having definite career plans. Predictably, the most frequently selected career cluster for the commerical or business student (Figure 5-15) was clerical work (1-1-1-1). In fact, for the ninth, eleventh, and twelfth graders clerical work had a higher numeric total than all the other clusters combined. The remainder of the career clusters selected for commercial or business students were: Number work (4-2-2-2), nursing (0-0-6-3), serving personal needs of people (3-7-3-6), and artistic work (2-3-7-6). However, the numeric totals for most career clusters in the lower portion of the first ten are small, making projections for the entire population of business students difficult.

Groups Which Influenced Career Choice

If students responded to "yes" whether they had definite career plans, they were then asked to respond to other questions. The first of these was which group helped them most in the selection of their career plans. Students were to respond only once to a checklist of eight groups or activities. The groups included parents, friends, teachers, and counselors. Work experience activities, other activities, and school activities were covered. A category labled "other" was included as a catch-all for anything else; Figures 5-18 and 5-19 review the groups or activities checked by seniors and underclassmen respectively.

FIGURE 5-18

Groups Which Influenced the Career Choice of Seniors

Group Most Helpful to Students With a Definite Career Choice

	All Seniors	Male	Female	College Prep	General	Vocational	Business	Ind. Arts	Home Ec.
Parents	25	24	25	29	22	19	23	0	*
Friends	9	9	9	8	13	8	8	13	-
Teacher(s)	10	9	11	10	7	8	19	40	-
Counselor(s)	3	5	2	4	2	4	0	0	-
Work Experience	18	18	18	9	21	34	28	40	-
Other Activities	10	9	11	14	11	5	0	7	-
School Activities	5	5	4	6	4	3	5	0	-
Other	20	21	20	20	20	19	17	0	-
Total-Those with definite plans	100%	100%	100%	100%	100%	100%	100%	100%	-
Total number of students	731	343	387	363	136	134	64	15	-
Percent of total senior responses	60%	58%	61%	68%	46%	62%	58%	52%	-

*The sample is too small for meaningful data.

FIGURE 5-19

Groups Which Influenced the Career Choice of Underclassmen (9-10-11)

Group Most Helpful to Students With a Definite Career Choice

	All Undercassmen	Male	Female	College Prep	General	Vocational	Business	Industrial Arts	Home Economics
Parents	27%	25%	28%	30%	25%	23%	32%	21%	22%
Friends	8	8	8	7	9	10	7	11	10
Teacher(s)	6	5	7	5	4	6	7	6	8
Counselor(s)	5	4	6	5	4	9	5	3	6
Work Experience	13	18	9	7	15	22	16	23	18
Other Activities	11	10	12	14	12	7	7	9	16
School Activities	7	7	7	8	5	4	7	9	2
Other	23	23	23	24	26	19	19	18	18
Total-Those with definite plans	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total number of students	3102	1424	1669	1386	453	594	310	160	51

Please note that only those students who had definite career plans are included in these statistics, and the percentages relate to only these students.

The most frequently selected influence group for all students was parents. Twenty-five percent of seniors and 27% of underclassmen checked parents. There is little difference in the percentages when compared by sex. However, there are considerable differences when the program variable is introduced. For seniors, 29% of college preparatory students checked parents versus no selections by industrial arts students. When underclassmen were polled, 32% of commercial or business students and 30% of college preparatory students checked parents.

Friends were checked with nearly equal frequency by all groups. The range was 7%-13% for all students with arithmetic means of 9% for seniors and 8% for underclassmen.

Teachers, as an influence on career choice, had a relatively small range of 4% for general student underclassmen to 11% for senior females. There are two notable exceptions: 19% of the senior commercial students and 40% of senior industrial arts students were influenced most by teachers in formulating their career plans.

Counselors were mentioned more frequently by underclassmen than seniors as an influential source of information. On the average, 3% of seniors and 5% of underclassmen checked counselor. Senior males and underclassmen females were more likely to check counselor. The range for underclass programs was 3% to 9%. The senior range was 0% to 4%.

Work experience was an important source of career information for all students with 18% of seniors and 13% of underclassmen. It is likely the percentage difference of male (18%) and female (9%) underclassmen is accounted for simply because more males hold jobs as underclassmen. (See Figure 5-5.) Work experience seems an especially important source of information for vocational, commercial or business, industrial arts, and general students.

Ten percent of seniors and 11% of underclassmen selected "other" activities. There was little variation by sex. All college preparatory and 9-10-11 home economics students had the highest frequency of choice with 14% and 16% respectively. Respondents were not asked for examples of other activities, but presumably one of the important ones would be Exploror Posts. The Exploror program and its Career Interest Survey is the subject of the next chapter.

School activities were checked by 5% of underclassmen and 5% of seniors. The range for all programs was 2% to 9%. Guest speakers, field trips, and class projects would probably be included in this category.

The category of "other" had a request for cited examples. A large portion of those surveyed checked it. Twenty percent of seniors and 23% of underclassmen selected "other." By far the most often mentioned example was "myself." Most of the students mentioning this category believed they, themselves, had been the primary source of knowledge about their chosen career.

One might raise a serious question about the validity of a question asking for the "most" important source. In addition to semantical problems involved, it is likely that a career selection is based on numerous sources of information. It might have been more meaningful for students to order their first three choices with respect to the degree of importance. Future surveys should address themselves to this question.

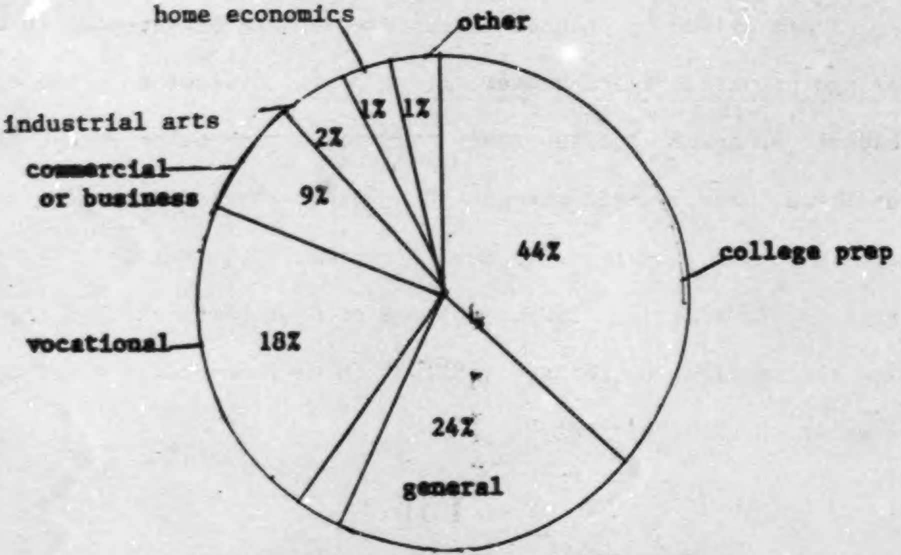
Senior Attitudes on Adequacy of Their Academic Preparation

The seniors who participated in this study represent most of the high schools within the county and present a large enough cross section to give a reliable evaluation of the programs within the high schools. Nearly half of the 1,225 seniors are males and 44% of all the seniors are in college preparatory programs. This 44%, when compared with the 40% of all 9-11 graders, is a sizable amount since the seniors represent only 18.1% of the total student population in this study.

Among the seven programs of study, males were predominate in three--college preparatory (284 to 252), industrial arts (28 to 1), and general (154 to 138). A greater number of women responded in the other three programs--vocational (121 to 95), business or commercial (91 to 18), and home economics (14 to 0). The program affiliations of seniors is the subject of Figure 5-20.

Figure 5-20

Program Affiliations of Seniors



Seven high school programs - 1,225 seniors

The attitudes of students can be a powerful force in educational evaluation. Course evaluations and follow-up studies on graduates are two of the frequent examples of this type of feedback. This is why seniors may be in an excellent position to evaluate learning as compar with underclassmen. Therefore, seniors were asked a question that underclassmen were not concerning whether the preparation they had in school helped them to accept a job, to continue their education, or whether it did both or neither. One might raise a reliability-related question concerning these responses. Even though seniors may be able judge the value of their formal education better than underclassmen, a assessment several years after graduation may yield more reliable resu Keeping this limitation in mind, a presentation of the seniors' respon is contained in Figure 5-21.

A review of the data for all students combined shows 17% checkin accept a job, 30% continue your education, 29% both, and 23% neither. Senior males and females do not differ markedly in their attitudes. However, a greater percentage of women checked "accept a job," while more men checked "continue your education."

A comparison by program shows considerable differences in opinio College preparatory and commercial or business students rated their academic programs more favorably than any of the other groups of prog enrollees. Forty-seven percent of college preparatory students selec "continue your education," which is obviously the primary goal of thi program. In addition, 29% of college prep students checked "both." Also the smallest percentage (18%) of these same students for both programs checked "neither."

FIGURE 5-21

Senior Attitudes Toward Adequacy of Academic Preparation

Do you think your high school adequately prepared you:	All Students	M	F	College Prep	General	Vocational	Business	Industrial Arts	Home Economics	Other
1. To accept a job	17%	14%	20%	5%	20%	36%	32%	21%	14%	22%
2. To continue your education	30	33	27	47	21	9	17	14	29	22
3. Both	29	28	30	29	25	34	32	28	29	28
4. Neither	23	24	22	18	34	21	18	38	29	22

Vocational students were second highest in their favorable attitudes toward their school program. Thirty-six percent of vocational students checked "accept a job." This is understandable since the goal of a vocational program is job preparation. Of the vocational students, 34% selected "both" and 9% chose "continue your education."

Home economics students were next on a continuum of satisfaction, while the "other" category has approximately the same percentages as home economics.

It is in the industrial arts and general programs we find the largest percentage of enrollees checking "neither" - 38% and 34% respectively. Over one-third of the students in both programs believe their high school has inadequately prepared them for either work or continued education. Whether these student opinions are accurate is, perhaps, debatable. However at the very least, these responses represent dissatisfactions of some type, perhaps manifesting themselves on these questions.

It is interesting to note how many students in the "occupational" programs believe their schooling has prepared them to go on to further education. If you combine items 2 and 3 in Figure 5-21, you find 43% of vocational, 49% of business, 42% of industrial arts, 58% of home economics, and 50% of "other" students believing they are adequately prepared for further schooling. This suggests a provocative question: Are students in the "occupational" programs adequately prepared for higher education given the varied curricula they have mastered? Are they really as prepared for college as they might have been? Or perhaps this is a reflection of societal values which can dictate that to be "acceptable," programs must provide enough "academics" to enable students to be vertical mobile into and through college?

Adequacy of Career Information

In an attempt to determine whether the students with definite career plans were satisfied that they had received an adequate amount of career information, a question was included to that end. (See Figure 5-22.) Seniors were more favorable than underclassmen with 64% to 49% respectively answering "yes." More women than men were satisfied. There was considerable variance by academic program of seniors with a range of 52% of general students and 80% of home economics students. Generally speaking, underclassmen were less favorable than seniors. The range for "yes" answers in underclass programs was 43% for general and 63% for vocational students. Overall, general students had the largest percentage of "no" answers.

FIGURE 5-22

Adequacy of Received Career Information

Students with Definite Career Plans	Percentage Answering "Yes"	
	Underclassmen	Seniors
All Students	49%	64%
Male	48	60
Female	50	68
College Preparatory	44	65
General	43	52
Vocational	63	70
Commercial or Business	55	73
Industrial Arts	44	60
Home Economics	47	80

Chapter VI

THE EXPLORING SURVEY ON STUDENT CAREER INTERESTS

CHAPTER HIGHLIGHTS

*This chapter reviews a previously unpublished research study conducted by the Exploring program of Boy Scouts of America which reached over 9,000 Lake County students during the 1973-74 school year.

*Public service jobs were the most frequently cited career cluster with 20% of respondents mentioning them. Health, communications, engineering and clerical-secretarial were the the next most frequently cited clusters. (Figure 6-1)

*Even though employment in manufacturing is 46.9% of the labor force in Lake County, only 3% of the students expressed a primary interest in this career cluster.

*The most frequently cited specific careers were, in rank order: (1) auto repair/service, (2) secretary/stenographer, (3) nursing, (4) veterinarian, and (5) music-instrumental. (Figure 6-2)

*There were considerable differences between the responses of junior and senior high students.

*The number of students selecting each career by school is reported in Figure 6-3.

*A comparison of the 1974 Career Aspirations Survey (Chapter V and VII) and the Exploring Survey shows one major inconsistency in the area of public service jobs. (Figure 6-4)

*A direct comparison between the 1969 Career Aspirations Survey and the 1974 Exploring Survey is made. There are a number of dramatic changes in rankings of certain careers; notably teaching, stewardess, artist, computer programmer, nurse, military service, pilot, veterinarian, dramatics, architect, and physician.

EXPLORING CAREER INTEREST SURVEY

Background

During the last few years, the Northeast Ohio Council of Boy Scouts of America has been conducting annual surveys on career interests. This research had as its aim to develop Exploring Posts centering around students' career interests. Exploring Posts have as their primary purpose to bring young adults into association with adults who are representative of a career or leisure interest. These young men and women ages 14-20 learn about something in which they have a personal interest. This represents a major change in the Exploring programs before 1969 which were closely associated with Boy Scout type activities.

This previously unpublished survey gives some indication of students career interests as well as their knowledge of realistic career opportunities. In total, 9,358 Lake County junior and senior high school students were contacted.

Procedures for Collecting Data

A brief questionnaire was developed listing thirteen occupational clusters further broken down into 103 specific careers. The career list was based in part on the Dictionary of Occupational Titles (D.O.T.) breakdown.[1] However, in order to simplify (there are nearly 22,000 D.O.T. classifications.) and localize the list, changes were made in the D.O.T. classifications. The questionnaire used in the survey is illustrated in the appendix. Even though recreation and leisure interests were also determined for purposes of this study, we did not include them in this report. However, that information is available from the Painesville, Ohio, office of the Boy Scouts.

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[1] Dictionary of Occupational Titles, Volume II, U.S. Government Printing Office, Washington, D.C., pp. 1-24.

The instructions for completing the questionnaire were quite simple:

> Read over the ENTIRE list of careers and check those which interest you. Review the career areas you have checked and pick the three which interest you MOST. Write the code numbers for the three careers you have chosen in the boxes marked for first, second and third choices under CAREERS. Do the same for recreation and leisure interests. Read the entire list, marking all the areas which interest you. Then select the three which interest you most and write their codes in the appropriate boxes.[2]

The questionnaires were administered in homeroom in each of the schools contacted. All "western" Lake County schools (Mentor - Kirtland and east) were surveyed in March, 1974 with the exception of Wickliffe High School (October, 1973) and Willoughby South High School (March, 1973). The "eastern" Lake County schools were all polled in the Autumn of 1973.

LIMITATIONS

When compared with the student survey presented in Chapter V, the survey shows four significant differences. Firstly, all students were forced to make a choice in the Exploring Survey. By contrast, only those with "definite" career plans selected a career cluster in the survey reported in Chapter V.

Secondly, students in the Exploring Survey were asked which career areas interested them; they were not asked for definite career plans as in the career aspiration study (Chapter V). Therefore, we have no way of judging the level of interest in the careers selected.

Thirdly, each job classification system, whether based on the D.O.T. or another source, is bound to have its shortcomings. No doubt there are many jobs which have not been included on the questionnaire as the careful reader will observe. However, there are 103 job classifications.

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[2] Even though students did select three career interest areas for purposes of this study, we have reported only the first choice.

Lastly, there are some junior high students' questionnaires reported in the high school totals. Some schools such as Fairport-Harding High School have the ninth graders in the same building. However, even with these limitations, the results have many implications for needed career information and guidance for students.

PRESENTATION OF THE DATA

Career Cluster Rankings

In recognition of the fact that there are many similar areas of knowledge and skill necessary to perform in any given job cluster, the rankings of the thirteen career clusters or general categories, rather than specific careers, are presented first in Figure 6-1.

Public service was the most frequently cited area of career interest with 20% of the total respondents. The percentage of total respondents selecting public service is somewhat higher for junior high school students than for high school students. By contrast, sales and marketing careers are ranked last with 2% of total respondents.

It is interesting to note that employment in manufacturing in Lake County is 46.9% of the labor force.[3] Yet only 3% of students in the survey have their primary interest in this area of employment. More of these comparisons come in Chapter VIII as well as an attempt to compare student interest in particular careers with job opportunities based on authoritative information.

To add more specificity to the career interest information, the top twenty-five individual job clusters have been ranked in Figure 6-2, along with the rank for junior and senior high responses.

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[3] Employment in Manufacturing 1968-73, Lake County, Ohio, Lake County Planning Commission, September, 1973, page 7.

FIGURE 6-1

Ranking Career Clusters - Exploring Survey

	Total Survey			High Schools			Jr. High Schools		
	#	%	Rank	#	Percent of total high school responses	Rank	#	Percent of total high school responses	Rank
Public Service	1,938	20%	1	1,433	19%	1	505	22%	1
Health	1,331	14%	2	1,020	14%	2	311	14%	2
Communications and the Arts	1,114	11%	3	825	11%	3	289	13%	3
Engineering, Math & Science	1,022	11%	4	786	11%	4	236	10%	4
Clerical-Secretarial	816	8%	5	637	9%	5	179	8%	6
Mechanical Repair and Service	754	8%	6	545	7%	6	209	9%	5
Building Trades	648	7%	7	496	7%	8	152	7%	7
Business Administration	625	6%	8	536	7%	7	89	4%	8
Horticulture	323	3%	9	258	4%	10	65	3%	10
Manufacturing	320	3%	10	243	3%	11	77	3%	9
Food Service	317	3%	11	271	4%	9	46	2%	12
Social Science	295	3%	12	238	3%	12	57	3%	11
Sales and Marketing	206	2%	13	161	2%	13	45	2%	13
Total	9,709	99%*	X	7,449	101%*	X	2,260	100%*	X

*Rounded percentages do not total exactly 100%

Figure 6-2

The Top Twenty-Five Specific Career Interests*
Exploring Survey

Rank-All Students		Totals	High School		Junior High	
		#	#	Rank	#	Rank
1.	Auto repair/service	551	401	1	150	1
2.	Secretary/stenographer	461	358	2	103	3
3.	Nursing	385	281	3	104	2
4.	Veterinarian	259	186	6	73	5
5.	Music-instrumental	256	204	5	52	8
6.	Accounting	241	207	4	34	16
7.	Lawyer/judicial	233	184	7	49	9
8.	Barber/hair stylist/ cosmetology	219	147	11	72	6
9.	Doctor/physician's assistant	217	178	9	39	13
10.	Business management	206	181	8	25	24
11.	Carpentry	203	149	10	54	7
12.	Architecture	179	141	12	38	15
13.	Law enforcement/police	173	124	15	49	9
14.	Social worker	166	136	13	30	20
15.	Teaching**	161	72		89	4
16.	Construction	158	126	14	32	19
16.	Electrician	158	117	19	41	11
16.	Drafting/mechanical drawing	158	119	18	39	13
19.	Coaching	156	124	15	32	19
20.	TV-Radio broadcasting	148	108	22	40	12
21.	Welder	143	110	20	33	17
22.	Forestry	138	110	20	28	23
23.	Home economist/homemaking	136	120	17	16	25
23.	Legal secretary/court reporting	136	103	23	33	17
25.	Military service	130	100	25	30	21
		5,371	4,096	X	1,196	X

*There were 103 total job classifications.

**The totals do not include responses from five high schools which had the job category accidently omitted from the questionnaire. The high schools are Painesville Harvey, Riverside, Fairport, Perry and Madison.

Auto repair and service was the most frequently cited career area with 551 students overall selecting that area. Next comes secretary/stenographer nursing, veterinarian, music-instrumental, accounting, lawyer/judicial, barber/hair stylist/cosmetology, doctor/physician's assistant, and business management rounding out the first ten.

When comparing junior and senior high responses, certain differences are apparent. High school students seem considerably more interested in certain careers than junior high students. The careers showing a higher rank by high school students are: accounting, business management, social worker, construction, and home economist/homemaking. Those career interest areas ranked considerably higher by junior high students were: barber/hair stylist/cosmetology, law enforcement/police, teaching, electrician, drafting/mechanical drawing, TV-radio broadcasting, and legal secretary/court reporting.

It is interesting to review county-wide totals. However, presenting the data in this way does not offer the specific information of greater use to the individual schools. Counselors, faculties, and administrators need to know specifically what career interests their students have. To that end, the detailed Exploring Career Interest Survey data is presented in its entirety in Figure 6-3.

FIGURE 6-3
EXPLORING CAREER INTEREST SURVEY
RESULTS BY SCHOOLS
SPRING, 1974

	Willowick Jr. High	Kennedy Jr. High	Eastlake Jr. High	Willoughby Jr. High	South High	North High	Ridge Jr. High	Shore Jr. High	Memorial Jr. High	Mentor High	Wickliffe Jr. High	Wickliffe High	Lake Catholic High	Kirtland High	Painesville Harvey High	Riverside High & John R. Williams High	Fairport Harding High	Perry High	Madison High	Totals
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
I. BUSINESS ADMINISTRATION																				
Accounting	7		1	1	20	22	7	7	5	80	6	15	24	8	6	2	2	11	15	241
Bank Management	1	1			3	3	2	1		4		3	4	5	9	2	1	3	5	47
Hotel/Motel Management	1		1	2	7	8	2	2		8	1	1	4		2	2	1	1	4	48
Purchasing					2				1	2		2	2			1			1	11
Farm Management	2	3	1	2	5	1	2	3	2	21			4	4	3	2	2	5	10	72
Business Management	2	2	2	2	14	18	3	6	2	43	6	10	13	4	1	5	2	5	16	206
	13	6	5	7	51	52	16	19	10	158	13	31	51	21	21	14	8	25	51	625
II. SALES AND MARKETING																				
Advertising	1		1	1	5	5		1		8	1	1	1		3	1	1	1	1	32
Insurance				1	1				1	5		2			1			2	3	16
Marketing							1			5		2	2	1				1	1	13
Public Relations		1	1			3		1		3		1	1					2	1	14

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Real Estate	1	1	1	2	2		1	2	1	8	1		7	2						29
Salesman/Mfr's Rep.	1	2			4	1	2	1	1	12		1	1		2	3	1	2	2	36
Sales Clerk	4	3		2	6	5	3	1	3	17	1	1	4	2	4		3	4	3	66
	7	7	3	6	18	14	7	6	6	58	3	8	16	5	10	4	5	12	11	206
III. MANUFACTURING																				
Assembly Worker	4	3			1	1			2	4	1	1		3	3	1	1	2	5	32
Machinist	4	6	2	3	6	9	1	4	1	16	5	7	3	1	4	11	2	8	14	107
Tool & Die Maker		1	1	2	7	4		2	1	9	1	4	1			2		1	2	38
Welder	2	2	3	3	11	5	4	10	4	36	5	8	3	4	4	15	3	9	12	143
	10	12	6	8	26	19	5	16	8	65	12	20	7	8	11	29	6	20	33	320
IV. BUILDING TRADES																				
Construction	3	2	4	3	7	18	7	5	2	24	7	10	11	5	4	10	4	5	27	158
Carpentry	6	4	4	9	16	3	5	13	7	31	6	7	15	7	9	27	6	9	20	203
Electrician	6	3	10	3	14	13	4	5	2	22	8	11	11	1	7	14	2	9	13	158
Plumbing	2		1	1	2	1				5	1	3	2	2		3	1	2	2	28
Heavy Equipment Opr.	2	2		3	7	9	1	1	3	20	7	1	5	2	1	9	2	8	18	101
	19	11	19	19	46	44	17	24	14	102	29	32	44	17	21	63	15	33	80	648
V. ENGINEERING, MATH & SCIENCE																				
Architecture	5	3	3	4	19	10	4	4	5	28	10	6	24	2	2	12	1	11	26	179
Astronomy	2		2	1	6	3	2	1	5			3	3	2		3		7	4	44
Biology/Bio Chemistry	4	3	3		13	7	1	2	3	12	3	2	6	3	5	5	1	10	10	93
Chem Engineer/Chemistry	2	1	1	1	5	1	1		3	10		2	7		2	6	4	1	4	51

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Civil Engineer	2			1	1	1	2	2	1	9			2	1		2	1	2	1	28
Drafting/Mech Drawing	6		4	7	12	6	6	2	5	14	9	12	15	5	8	12	6	12	17	158
Ecology/Env. Sciences	2	1			1	2			2	10		1	4	1	3	1	1	3	7	39
Electrical Engineering	5		4	2	8	3	5	3	5	14	2	5	11		1	6	1	3	6	84
Geology	1			1	1			2	1	2		1		2		1		1		13
Industrial Engineering	2		2		4	3			2	6	1	8	2	1	2	4		1	2	40
Mathematics	3	1	3		14	9	3	1	4	19	4	4	7		3	1		8	9	93
Metallurgy										1			1		1					3
Naturalist/Botanist		1		2	2		1	1	3	4		2	3	1		2			2	24
Physics					1		2	2	1	3			3	1		1		2	2	18
Zoology	3	1	2	3	11	2	3		3	15	3	1	5	2	3	3	2	4	11	77
Astronautics/Space Sciences	3		5	1	4	4	2	2	3	14		6	9	2	2	7	1	7	6	78
	40	11	29	24	102	51	32	22	46	161	32	53	102	23	32	66	18	72	107	1022
VI. MECHANICAL REPAIR & SERVICE																				
Air Cond/Refrigeration						3	1			2		5	1	1	2	2		1	1	19
Aircraft Mechanic	3	6	2		7	3	2	6	4	9	2	3	3	1	2	3		5	9	70
Auto Repair & Service	24	14	27	10	51	16	18	19	22	99	16	22	23	15	19	58	13	37	48	551
Business Machine Rep.			1	1	1					1								1	1	6
Computer Service	3	2	2	1	4	4		2	1	6	1	1	1	1	3	2	1	1	1	37
TV & Appliance Rep.	2		6	3	13	3		2		7	1	4	2	1	1	4	1	2		52
Telephone Rep/Install.		2		1	3	1		1		4	1		2		1	2			1	19
	32	24	38	16	79	30	21	30	27	128	21	35	32	19	28	71	15	47	61	754

Barber/Hair Stylist/ Cosmetology	13	3	7	11	19	7	9	8	11	42	10	12	14	8	9		7	13	16	219
Coaching	5	1	7	6	21	14	5		4	20	4	8	16	1	6	9	2	10	17	156
Fireman/Rescue	3	3		2	7	2	1	1	3	8	2		4	2	2	1	1	3	2	47
Gov't/Diplomatic Serv.			1		2	4				3	1		2	1		2		1	1	18
Law Enforcement/Police	5	7	5	6	11	13	5	8	8	43	5	6	15	3	6	8	3	10	7	173
Lawyer/Judicial	6	3	4	7	16	14	3	4	11	39	11	15	42	6	13	12	1	5	21	233
Library Sci/Librarian	1				1				1	1									2	6
Military Service	4	6	2	7	16	12	4	2	1	21	4	10	11	2	4	6	2	3	13	130
Recreation/Park Mgt.	1		2		13	6	1	2		12			4	1	1	7		1	5	56
School Counselor	3	3	6		10	5	1		4	20	2	6	3	3			2	7	6	81
Spec. Ed/Rehabilitation	2	1		1	6	10	2	3	2	42	2	7	8	4	4		6	9	7	117
Airline Pilot*	7	2	10	5		5		4	9		3		17	1						*
Airline Hostess*	6	6	11	20		6	10	12	13		9		24	10						*
Teaching*	13	16	10	12	13	5	12	15	5		6		40	14						*
	69	51	65	77	135	103	53	59	72	251	59	64	200	56	45	45	24	62	97	1587

VIII. FOOD SERVICE

Home Econ./Homemaking	4	4		2	9	5	1	1	2	39	2	4	14	1	6		3	28	11	136
Chef/Cock	1	2	2	2	8	5	3	1		8		1	1	2	6	2		8	5	57
Dietician				1		2			1	7			2	1			1	1	3	19
Restaurant Manager		1	1	1	5	3	1	1		3		4	4		2			3	1	30
Waiter/Waitress	1		2	1	11	6	1	3	3	19	1	3	3	1	3		3	1	13	75
	6	7	5	7	33	21	6	6	6	76	3	12	24	5	17	2	7	41	33	317

(See footnote (a.), Figure 6-5.)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
IX. COMMUNICATIONS AND THE ARTS																				
Art/Paint/Clay/ Stone. etc.	5	4	6	8	17	14	5	7	4	27	3	14	15	[illegible]	7	5	8	11	23	189
Commercial Artist	7	6	5	10	21	9	5	5	1	15	6	3	12	3	3	4	1	2	11	129
Film Making/Motion Pic.	2	1	1	2	3	3	1		1	8		1	2		1	2			7	35
Graphic Arts	1		2	1	1	2				5		1					1			14
Journalist	2	1	2	3	4	4	1	5	1	8	1	3	5	4	5		1	1	2	53
Music-Instrumental	5	5	2	9	32	17	7	16	13	65	4	17	10	4	7	6	3	10	24	256
Newspaper/Magazine Ind.			1		3	2				3			3		2	1		1	1	17
Photography	1	2	7	2	20	9	1	3	5	16	3	6	6	2	4	5	2	6	15	115
Printing		1			2	2			1	5		1							1	13
Theatre/Dramatic Arts	3		1	3	12	4	1	1	3	15	1	6	6	1	6	1	1	2	3	70
TV-Radio Broadcasting	3	3	8	5	4	9	4	3	11	25	3	10	9	6	8	15	1	5	15	148
Writer			3	1	6	3	3	1	1	11	2	2	2	2		1			6	44
Music-Vocal*	3	1		2		3	2	7	5		2		5	1						31
	32	24	38	46	126	81	30	48	46	203	25	64	75	29	43	40	18	38	108	1114
X. HORTICULTURE																				
Agriculture		1	1	2	3	1	1	3		6		1		5			1	2	7	34
Botanist						1				1		1	2	1	1				2	9
Forestry	1	4	1	5	11	8	7	4	4	22	2	5	12	5	3	9	7	8	20	138
Florist				1	5	4	2			9		4	4	1				2	3	35
Conservationist	1	1	1	2	4	2				12	1	2	6	2		2		5	8	49

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Landscaping/Landscape Architect			3	1	3		2	3	2	11	2	2	2	1		2		1	5	40
Nurseryman		1				1		2	1	3			1		1			1	7	18
	2	8	6	11	26	17	12	14	7	64	5	14	37	15	5	13	8	19	52	323
XI. HEALTH																				
Dentist/Dental Tech.	1	1	4	4	16	5		1	8	15	3	9	8	3	2	5		4	14	103
Doctor/Physician's Assistant	2	6	4	5	39	19	4	6	7	36	5	15	22	3	9		6	8	21	217
Medical Lab Tech.	1	3	1		5	2				9	2	3	9	4	2		1	2	6	50
Nursing Careers/L.P.N. R.N.	19	11	11	17	26	27	14	9	9	75	14	42	31	11	14		8	19	28	385
Optometrist/Optician		1					1	1		1		2				2	4	1	2	15
Pharmacist/ Pharmaceuticals					1	1	1	1	3	3		2	2	1	1				2	18
Psychologist/ Psychiatrist	2	3	7	3	6	6	3	8	4	26	1	7	12	9	5	1	1	5	7	116
Therapist/Physical, Mental, etc.	1	1	5	2	17	10	1	3	1	15	1	11	8	4	1	2	2	3	7	95
Veterinarian	5	6	13	10	23	16	5	16	9	45	9	10	13	9	14		4	16	36	259
X-Ray Technician	2		2	2	10	8		1		9	5	10	6	2	3	1	1	2	9	73
	33	32	47	43	143	94	29	46	41	234	40	111	111	46	51	11	27	60	132	1331

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
XII. SOCIAL SERVICE																				
Clergy/Pastor/Priest			1		2			1	1	8			2			1		1	3	20
Missionary/Medical, Religious						2	1		1	7	1		2		1		2		3	20
Social Worker	2	5	3	6	31	13	5	2	3	45	4	7	7	4	10		6	3	10	166
Youth Worker	1	1	3	4	17	4	2	4	6	18		1	6	2	3	2	3	5	7	89
	3	6	7	10	50	19	8	7	11	78	5	8	17	6	14	3	11	9	23	295
XIII. CLERICAL-SECRETARIAL																				
Bank Teller	2				4	1		1	1	8		3	2		3			7	6	38
Bookkeeping	1	1	1		4	6	1	4		13	2	2	4	3	5		2	5	8	52
Computer Operation	5	2	2	4	7	9	4	7	2	38	2	7	11	1	2	3		10	13	129
Legal Secretary/Court Reporting	2	3	1	4	11	7	6	8	3	35	6	13	9	4	3		4	6	11	136
Secretary/Stenographer	7	19	9	13	53	53	12	10	4	86	29	41	29	16	19		13	10	38	461
	17	25	13	21	79	76	23	30	10	180	39	66	55	24	32	3	19	38	76	816

ANALYSIS OF THE DATA

Comparing the Two 1974 Surveys

The 103 Exploring Survey job categories varied considerably from the 27 career cluster approach used in the career aspirations survey (Chapter V). Of course, the emphasis was different in the latter, with fewer career clusters being used for convenience and ease in curriculum and program planning. However, the more specific the job skills acquired by students, the more immediate is the job employability and performance. (See Chapter VII.) In addition, only students who expressed definite career plans answered the questions. It is interesting to compare these two surveys done at approximately the same time to the same body of students. Certain consistencies and inconsistencies are evident. Figure 6-4 places side-by-side the 13 Exploring Survey career cluster areas and arranges the career aspirations survey categories into nearly matching groups. The largest inconsistency is in the area of public service.

The Exploring career clusters are in descending rank order in Figure 6-4. Beside each category is a comparable grouping from the career aspirations survey. There was not an exact matching of career clusters. For example, manual work from the latter study doesn't fit anywhere precisely. There were overlaps as well. The skilled operation, repair, or installation of precision equipment included airline pilot and computer operator, which doesn't match the counterpart category of mechanical repair and service.

It should be pointed out once again that the students selecting career clusters in the career aspirations study were those who had definite career plans. This represented 57% of the 6,756 students surveyed. The Exploring study included everyone. A reasonable assumption is that the career aspirations figures might represent a better base for developing courses and programs to train students for these careers. Both groups provide valuable data for use in career guidance and information activities.

The 1969 Career Opportunities Survey

There was a considerable similarity between the 1974 Exploror Career Interest Survey and the 1969 Career Opportunities Survey.[1] In fact, Exploring officials and Lakeland Community College had worked together to develop the questionnaire used in 1969. Even though slightly different, an interesting comparison can be made.

Figure 6-5 ranks the top 25 career interest selections for both surveys. The 1969 survey is divided by freshman and tenth/eleventh grade responses. In addition, each career interest selection is reported as a percentage of the total responses.

There are many changes in the numbers of students expressing certain career interests since 1969. Of the top 25, those career interest areas that were more popular in 1974 are: auto mechanic, nurse, lawyer, veterinarian, law enforcement, physician, and architect. Some career interest areas have dropped in rank, but an increased percent of total students responded. This could legitimately be considered an improvement. The occupations are: engineer, construction, and forestry.

Those career interest areas showing a considerable decline in popularity are: teaching, stewardess, artist, computer programmer, and pilot. Several occupations have declined in rank, but have about the same percent of total student interest. These are: military science, dramatics, and electronics technician.

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[1] Lake County Career Opportunities Study, Lakeland Community College Mentor, Ohio, 1969.

FIGURE 6-4
A Comparison of the 1974 Exploring and Career Aspirations Survey Grouped by Career Cluster

Exploror Survey (All Lake County Students)	#	% of total	Career Aspirations (Students with definite career plans, 57% of total)	#	% of total
Public Service	1,938		Legal work	143	
Social Science	295		Serving personal needs	117	
			Providing skilled service	88	
			Training people	45	
			Teaching, counseling	333	
Total	2,233	(23%)	Total	726	(11%)
Health	1,331		Caring for people/animals	174	
			Nursing & related	392	
			Medical work	254	
Total	1,331	(14%)	Total	820	(12%)
Communications and the Arts	1,114		Musical activities	106	
			Entertaining people	52	
			Artistic work	189	
			Writing	46	
			Communications work	98	
Total	1,114	(11%)	Total	491	(7%)
Engineering, Math & Science	1,022		Number work	155	
			Engineering & other technical work	352	
Total	1,022	(11%)	Total	507	(8%)
Clerical-Secretarial	816		Clerical work	379	
Total	816	(8%)	Total	379	(6%)
Mechanical Repair & Service	754		Skilled operation, repair, or installation of precision equipment	177	
Total	754	(8%)	Total	177	(3%)
Building Trades	648		Craftmanship	130	
Total	648	(7%)	Total	130	(2%)
Business Administration	625		Managerial work	76	
			Appraisal and evaluation	9	
Total	625	(6%)	Total	85	(1%)
Horticulture	323		Agriculture & related biological work	154	
Total	323	(3%)	Total	154	(2%)
Manufacturing	320		Machine work	132	
			Inspecting	76	
Total	320	(3%)	Total	218	(3%)
Sales & Marketing	206		Promotional activities	14	
Food Service	317		Waiting on customers	40	
			Selling and merchandising	39	
Total	523	(5%)	Total	93	(1.3%)

FIGURE 6-5

A Comparison of the 1969 Career Opportunities Survey and the 1974 Exploring Survey

	1969 LCC Career Opportunities Survey							1974 Exploring Survey		
	9th		10th-11th		All Students			All Students		
	#	Rank	#	Rank	#	Rank	% total	#	Rank	% total
Teacher	316	1	543	1	830	1	6.4	161	15a	1.7
Stenographer/Secretary	257	2	423	2	680	2	5.2	461	2	4.7
Stewardess	153	3	270	3	423	3	3.3	127a	27a	1.2a
Mechanic (Auto)	153	3	167	7	320	4	2.5	551	1	5.7
Cosmetologist	128	4	179	6	307	5	2.4	219b	8b	2.3b
Artist	109	5	198	4	307	5	2.4	129c	26c	1.3c
Computer Programmer	100	6	196	5	296	7	2.3	129	27	1.3
Engineer	94	7	159	8	253	8	1.9	203d	11d	2.1d
Nurse	88	8	121	11	209	9	1.6	385	3	4.0
Electronics Technician	72	10	131	10	203	10	1.6	158	15	1.6
Lawyer	84	9	103	12	187	11	1.4	233	7	2.4
Military Service	53	15	133	9	186	12	1.4	130	24	1.3
Pilot	59	14	83	13	142	13	1.1	63a	39a	.7a
Construction	65	12	74	14	139	14	1.1	158	15	1.6
Drafting	60	13	74	14	134	15	1.0	158	15	1.6
Veterinarian	66	11	48	24	114	16	.9	259	4	2.7
Law Enforcement	46	17	67	16	113	17	.9	173	13	1.8
Dramatics	50	16	62	18	112	18	.9	70	38	.7
Forestry	41	19	67	16	108	19	.8	138	21	1.4
Oceanographer	42	18	62	18	104	20	.8	Xe	Xe	Xe
Welder	38	20	58	21	96	21	.7	143	21	1.5
Architect	37	21	59	20	96	21	.7	179	12	1.8
Home Economist	37	21	55	23	92	23	.7	136	22	1.4
Child Care	34	22	57	22	91	24	.7	Xe	Xe	Xe
Physician	38	20	47	25	85	25	.7	217f	9f	2.2f
Total Students Surveyed					13,000 (approx.)			9,709		

a. The totals do not include responses from five high schools which had the job category accidently omitted from the questionnaire. The high schools are Painesville Harvey, Riverside, Fairport, Perry, and Madison.

b. Category includes barbers.

c. The 1969 study did not have a category for commercial artist whereas the 1974 Exploror Study had only a commercial artist category. In the 1974 study, commercial artist ranked 26.

d. This job category was divided into four types for the 1974 study: chemical (51), civil (28), electrical (84), and industrial engineer (40). Together they total 203 and would rank 11th if the 1969 job categories had been used.

e. No comparable category in the 1974 study.

f. Category includes physician's assistant.

Chapter VII CAREER COUNSELING

CHAPTER HIGHLIGHTS

*A survey of forty counselors and some of the answers to the student survey are reported in this chapter.

*Research on both the local and national level suggests student concern for career planning and information.

*Most students rated the school services as satisfactory or excellent. Compared with Lake County students in 1969, students today were less satisfied with counseling for college; showed greater satisfaction toward career counseling; were more satisfied with library materials on careers; and were more satisfied on courses offered. (Figure 7-1)

*However, 29% of seniors rated as "poor" the preparation for what they plan to do after graduation; 31% rated career guidance as poor; 28% rated college counseling as poor; 18% rated the courses as poor. Seniors were more critical of these services than underclassmen. (Figure 7-1)

*There was a great variance in the average clock hours of counselors' time spent in career counseling. Most senior high counselors spend 16 hours or more per week, while most junior high counselors spend five hours or less per week in career counseling. (Figure 7-2)

*58% of counselors said most of their students expressed a readiness for career information. (Figure 7-3)

*Tests of general intelligence, aptitude and ability tests, achievement tests, and personal interviews were the primary vehicles used for career counseling. (Figure 7-4)

*Students and parents, in most cases, receive information about student career interest and aptitude. (Figure 7-5)

*Printed material to take home is the most popular delivery system for information on careers. (Figure 7-6)

*Counselors make suggestions for the improvement of career guidance.

*65% of counselors say their school has a career information or explanatory program for the general student.

RATIONALE AND BACKGROUND

As in the 1969 Lake County Career Opportunities Study, Sub-Committee Four elected to contact high school and junior high counselors concerning their career counseling. The rationale was that counselors are or could be a primary source of career information and guidance. Of course, there are certainly other important sources, notably teachers, family, and peer group. (See Figure 5-1, Chapter V.) However, of all the sources, counselors are likely to be more systematic and unbiased about career guidance. It is also likely the counselor is viewed with considerable source credibility by the student.

Even though it was logical to view the counselor's career guidance role as most important for the purposes of this survey, counselors were also a valuable source of ideas for the improvement of career guidance. Therefore, counselors' suggestions for improvements comprise an essential segment of this report.

On the national level, there has been considerable debate over the degree to which students should be trained vocationally. Various interest groups have argued for a more general education, giving students flexibility in career choice and job mobility. Others have suggested that schools must provide students primarily with specific marketable job skills in careers that offer personal growth and long-term opportunities. Of course, there are others within the continuum of these extremes.

The debate over how "vocationally-oriented" education programs should be is not confined to the K-12 grades. It exists on the college level as well [illegible]erhaps to a greater degree.[1] One fact is certain: As this report is being written, the United States is experiencing some economic problems. It has become common knowledge that it is not as easy to find suitable employment as it had been in the sixties. Some high school, community/junior college, and university graduates cannot find jobs in their chosen fields. Educators and students have searched for answers. One source makes a suggestion about college graduates that may apply to graduates at all levels.

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[1] Earl J. McGrath, "The Time Bomb of Technocratic Education," Change, September, 1974, pp. 24-29. The Learning Society, Robert Hutchins, Praeger Publishing Co., 1968. Vivian Brown, "Education Should Lead to Jobs Says Author of Career Guide," The News Herald, November 17, 1974, p. 2B.

> When jobs are plentiful, employers may hire graduates regardless of whether their college courses trained them for a particular type of work. But when applicants are plentiful, the courses taken in college do make a difference. Everything else being equal, employers are more likely then to hire the graduate who had some vocation-related preparation in college.[2]

This represents the prevailing view of the businessmen who hire the largest share of high school and college graduates. This viewpoint is supported by the 28th annual job survey done by Frank Endicott of Northwestern University. His 1974 study states that interest in liberal arts majors continues to diminish while business majors are being hired in the same numbers as last year.[3]

If at least some specific occupational education and training is an advantage to students, and students as well as their parents want it; it follows that responsible schools should provide this occupational education. It further follows that expert, concurrent career guidance and counseling is a necessity.

Certainly the attitudes of students toward career information and planning is critical. As indicated in Chapter V, 44% of all students in our survey said career planning was "very important" to them. Another 48% said it was "moderately important."

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[2] "Job Outlook for College Grads: Now to 1980," Changing Times: The Kiplinger Magazine, July, 1973, p. 4.

[3] Robert Dietsch, "Job Picture Brightens for College Graduates," The Cleveland Press, March 23, 1974, p. 1.

On a national level, we find some evidence that our youth do indeed want career guidance. In 1973, a national survey of college and non-college youth between the ages of 16 and 25 was completed. A total of 3,522 personal interviews were conducted by a noted researcher.[4] From the findings three changes in youth values are most relevant to educators.

> First, we now find that the most disaffected among today's generation of young adults are not college students, but the young high school graduates who have ended their formal education and have gone directly to work and/or marriage. The contagion of the new campus-bred values has spread from the college minority to the non-college majority, creating a vast dissatisfaction. Comparatively speaking, college students are content with their lot. Second, on campus, student interest has shifted away from social reform and is now heavily focused on the self and its private vicissitudes. Today's college youth have little emotional commitment to changing society and are, instead, preoccupied with their own career planning and personal self-fulfillment. Third, a merger between the new campus-bred values and traditional careers that seemed impossible to bring about a few short years ago is now being pursued actively and aggressively by increasing numbers of college students . . . new values, confined almost exclusively to the campus several years ago, have now spread to the majority of the nation's young people--thereby closing the intrageneration gap, but at the same time opening up a painful dilemma for the average high school graduate.
>
> The heart of the dilemma relates to work and career. In contrast to earlier attitudes, young blue collar workers now place as much stress on finding "interesting work" as on work that pays well. At the same time, they are aware that without a college education, their opportunities to find work that is both financially and psychologically rewarding are not very great. Today's non-college youth, like their college counterparts, tend to take somewhat for granted the extrinsic rewards of work--good pay, a mounting standard of living, economic security. Like their college peers, they have taken up the quest for a new definition of success which stresses personal self-fulfillment and quality of working life as much as it does economic security. Unfortunately, however, as our society

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[4] Daniel Yankelovich and Ruth Clark, "College and Non-college Youth Values," *Change*, September, 1974, p. 45. (Daniel Yankelovich is president and Ruth Clark is senior vice president of Yankelovich, Skelly and White, Inc., one of the country's largest marketing and social research firms. Mr. Yankelovich is the author of *The New Morality*, a study of college and non-college youth, published by McGraw-Hill.)

> is now constituted, these young people want something they cannot have. And this they recognize. But it leaves them anxious and dissatisfied, vaguely yearning for a new kind of education--one that does not now exist--that will help them to fulfill their new goals.[5]

In this same report, 76% of students contacted said career planning a year after high school would make an important difference in their lives. This year would feature exposure to many different fields and job opportunities and feature new forms of career counseling.

We are pleased to report that in Lake County, all public high schools provide for some degree of career guidance. This is considered an essential counseling function. In some schools, there is one counselor who is titled the Vocational Counselor and presumably spends all or most of his time in career-related guidance. Of course, non-vocational counselors do considerable career-related counseling as reported later in this chapter. This is not apparently the case on a national level. A study by the U.S. Office of Education revealed the following:

> A recent sudy of publicly sponsored occupational programs in 20 U.S. cities found no vocation guidance in 48 percent of the secondary schools, 24 percent of the postsecondary schools, and 28 percent of U.S. Department of Labor Training projects. The study was part of the National Planning Association's evaluation of vocational education for the U.S. Office of Education.[6]

This guidance gap is a serious problem for students. But it is information such as this which prompts constructive criticism of career counseling and helps provide a rationale for this report.

There has also been some concern over the preparation and orientation of school counselors on a national level. Consistent with this view is a recent report by The National Advisory Council on Vocational Education.

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[5] Ibid, p. 45.

[6] Cited in: Lawrence Davenport, "Career Guidance: A Call for Change," Manpower, November, 1972, pp. 11-13. Mr. Davenport is chairman of the National Advisory Council on Vocational Education and Vice President for development of Tuskegee Institute.

> This report is the result of nearly a year's study, including numerous meetings with representatives of business, labor, education, and the general public.
>
> In this investigation, the Council found that most school counselors are academically oriented and interested mainly in guiding academically able students toward college. (Even the post-secondary schools, according to the National Planning Assocation study, 24 percent of the schools in the 20 cities surveyed had no vocational guidance services.) Academic guidance is one valid function of counselors, but it should not be their exclusive concern. Most secondary students do not go on to college and would benefit from counseling on post-secondary, vocational, and technical education opportunites. Unfortunately, most counselors ignore their responsibilities toward these students and know very little about vocational courses or the jobs they lead to.
>
> Although school counselors themselves must bear much of the responsibility for these failures, others must share the blame. Among them are school administrators who downgrade the need for professional counseling and assign counselors to other duties; parents who pressure their children and their children's counselors into pursuing the idea of college attendance to the exclusion of any alternatives; educational institutions that require future counselors to take only one occupational guidance course; the business community that fails to provide school counselors with adequate information on work opportunities; manpower experts who fail to disseminate adequate information to counselors on training programs and on the earnings of program graduates; and labor unions that fail to build close relationships with educational institutions.[7]

As the latter segment of this quotation suggests, there are many partners in the career information and guidance activity, counselors are only one. They are, however, an important and influential part of the process.

OBJECTIVES OF THE REPORT

Sub-Committee Four sought to achieve the following objectives:

1. To determine student attitudes toward career counseling services offered in the public schools.
2. To discover the approximate time counselors spend in career counseling.

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[7] Counseling and Guidance: A Call for Change, The National Advisory Council on Vocational Education, 1972. (The report is available free in quantities under 100 from the Council, 425 13th St. NW, Suite 852, Washington, DC 20004.)

3. To specify the principal vehicles used by counselors to determine student career potential and interest.

4. To determine the delivery systems used to communicate the career potential and interest information.

5. To gather suggestions for improved career education services the schools might provide.

PROCEDURES FOR COLLECTING DATA

To meet the first objective of this report, it was necessary to include questions in the student survey. (See Chapter V and the append Both seniors and 9-10-11 graders were asked about their attitudes towar career counseling. As reported earlier, senior replies totaled 1,225 while underclassmen equalled 5,531. These results were then compared against senior responses in the 1969 study.

Additionally, a questionnaire for counselors was drafted includin questions designed to reach the last four survey objectives. After approval by the sub-committee, the questionnaires were sent to the respective school superintendents who distributed them to all counselo The questionnaires were returned by mail. Therefore, it was a non-probability sample in that there was no direct control over exactly which counselors replied. However, thirteen Lake County junior and senior high schools were represented.

PRESENTATION OF THE DATA

Student Attitudes

Lake County students were asked a series of questions on selected school services including career guidance. The results are included a compared in Figure 7-1. There were five specific school services to which students were to respond.

FIGURE 7-1

Student Ratings of Selected School Services

	Study-Grades	Excellent %	Satisfactory %	Poor%
1. Counseling or guidance on post high school education	1974-9-10-11 grades	19	66	14
	1974-Seniors	16	56	28
	1969-Seniors	50	25	25
2. Counseling or guidance on career choice	1974-9-10-11 grades	20	59	19
	1974-Seniors	13	55	31
	1969-Seniors	8	53	39
3. Library materials and information about careers.	1974-9-10-11 grades	21	58	18
	1974-Seniors	21	63	15
	1969-Seniors	12	62	26
4. Courses offered	1974-9-10-11 grades	24	57	17
	1974-Seniors	19	61	18
	1969-Seniors	12	62	26
5. Preparation for what I plan to do after graduation	1974-9-10-11 grades	20	59	20
	1974-Seniors	15	56	29
	1969-Seniors	13	54	33

The first service dealt with counseling and guidance for post-high school education. Most students in the current study rated counseling or guidance services on post-high school education as excellent or satisfactory. However, only 16% of 1974 seniors ranked it as excellent compared to 50% of the seniors in 1969. Approximately one-fourth of the seniors in both studies rated these services as poor.

Counseling or guidance on career choice was rated satisfactory by slightly over 50% of all groups. However, 31% of 1974 seniors, 30% of 1969 seniors, and 19% of the underclassmen rated this service as poor. By contrast, 20% of the 1974 underclassmen, 13% of the 1974 seniors, and 8% of the 1969 seniors rated these services as excellent.

Since 1969, there has been a marked improvement in the attitudes toward library materials and information about careers with 21% of all students in the current study rating them as excellent. Most rated these services satisfactory or higher.

There has been little improvement in the ratings of courses offered since 1969 with approximately 60% of all groups rating them satisfactory. Fewer 1974 seniors rated courses offered as poor and more rated them excellent when compared to the 1969 study.

When asked about the school services relating to "preparation for what I plan to do after graduation," the underclassmen were more favorable than were the seniors in 1969 and 1974. In both studies, seniors ranked these services almost identical, with slightly over half saying they are satisfactory while approximately a third rated them as poor.

Overall, seniors tend to be more critical than underclassmen of the five selected school services. Only with regard to library materials and information about careers are there more "favorable" responses (excellent and satisfactory combined) than underclassmen responses.

Counselor Survey

The second source of information about career counseling was the counselors themselves. Twenty-five high school and fifteen junior high school counselors returned questionnaires. Of the forty respondents, six were classified as vocational counselors, the remainder being non-vocational. All but one respondent was a full-time counselor. Thirteen junior and senior high schools were represented. The counselor questionnaire is illustrated in the appendix.

Counselors were asked to indicate the number of clock hours they spend per week in advising students about careers, career opportunities, and job placement. Figure 7-2 details their responses to that question. Predictably, there is a considerably difference in the senior and junior high school responses. Forty-five percent of the senior high counselors spend 16 hours a week or more on career counseling. By contrast, all but two junior high school counselors (86% of respondents) spend 0-5 hours per week on the same activity. Conselors' time per week spent on career counseling is highest among high school counselors.

FIGURE 7-2

Clock Hours Per Week of Counselors Time Spent in Advising Students about Careers, Career Opportunities, and Job Placement

	Time Per Week	Senior High Counselors		Junior High Counselors		Total Responses for All Counselors	
		#	%	#	%	#	%
1.	0-5 (hours)	4	16%	13	86%	17	42%
2.	6-10 (hours)	5	20%	1	7%	6	15%
3.	11-15 (hours)	5	20%	0	0%	5	12%
4.	16 and over (hours)	11	24%	1	7%	12	31%
	TOTALS	25	100%	15	100%	40	100%

Student Readiness for Career Guidance

One question that is inevitably asked about career counseling is the readiness of students for this kind of information. Sub-Committee Four questioned this as well; subsequently, each counselor was asked whether most of his students seemed ready for career guidance and information. Figure 7-3 shows the responses. Overall, 58% of all counselors said "yes." Surprisingly, 67% of the junior high school counselors said "yes" versus 52% of the high school counselors. It is interesting to compare this to the student responses where 44% considered career planning "very important" and 58% checked "moderately important." (Chapter V)

In addition, counselors were asked to indicate what were the principal vehicles they used to determine student career potential and interest. It was believed that this information might be useful to all counselors in Lake County. The usage rates of five types of tests as well as the personal interview method are reported in Figure 7-4.

Senior high and junior high school counselors use tests of general intelligence, aptitude and ability tests, achievement tests, and personal interviews primarily. Neither group uses personality testing to a great degree, but it is apparently used more frequently in junior high schools. Tests of interest were a more popular device for high schools.

Also of interest to Sub-Committee Four was the degree to which parents were involved in helping students make career choices. A starting point would be to determine if parents are informed of the results of a counselor's efforts to assess student career potential and interest. Counselors' responses are indicated in Figure 7-5.

Slightly over half of junior high and high school counselors give the information to students and parents. The junior high school counselors tend to give the information to students more frequently than do their high school counterparts. Whereas, "students and parents upon request" was the favorite choice of 40% of the high school counselors and 27% of the junior high school counselors.

The importance of parents as a source of career information should not be underestimated. As reported in Chapter V, parents were the most frequent source of help in student career planning. Specifically, 25% of all seniors with definite career plans, as well as 27% of underclassmen surveyed, listed parents as the group which helped them the most in their career planning.[8] By contrast, underclassmen ranked counselors (5%) and teachers (6%) as their fifth most frequent choice. Seniors ranked teachers fourth (10% of the total) and counselors eighth (3% of the total).

FIGURE 7-3

Counselor Indication of Student Readiness for Career Guidance and Career Information

	Senior High Counselors		Junior High Counselors		Total Responses For all Counselors	
	#	%	#	%	#	%
Most of my assigned students express a readiness	13	52%	10	67%	23	58%
Most of my assigned students do not express a readiness	8	32%	2	13%	10	25%
Not sure	4	16%	3	20%	7	17%
TOTALS	25	100%	15	100%	40	100%

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[8] See Chapter V on Career Aspirations of Lake County Students, Figure 5-18.

FIGURE 7-4

Principle Vehicles Used to Determine Student Career Potential and Interest

		Senior High Counselors		Junior High Counselors		Total for all Counselors	
	Usage *	#	%	#	%	#	%
Tests of Interest	Heavy	13	52%	4	28%	17	43%
	Frequently	0	0%	0	0%	0	0%
	Rarely	10	40%	5	36%	15	38%
	Never	2	8%	5	36%	7	18%
Tests of General Intelligence	Heavy	22	88%	10	72%	32	82%
	Frequently	3	12%	4	28%	7	18%
	Rarely	0	0%	0	0%	0	0%
	Never	0	0%	0	0%	0	0%
Aptitude and Ability Tests	Heavy	18	72%	12	86%	30	77%
	Frequently	3	12%	1	7%	4	10%
	Rarely	4	16%	1	7%	5	13%
	Never	0	0%	0	0%	0	0%
Achievement Tests	Heavy	14	56%	11	79%	25	64%
	Frequently	3	12%	3	21%	6	15%
	Rarely	5	20%	0	0%	5	13%
	Never	3	12%	0	0%	3	8%
Personality Tests	Heavy	1	4%	3	21%	4	10%
	Frequently	0	0%	2	14%	2	5%
	Rarely	2	8%	2	14%	4	10%
	Never	22	88%	7	50%	29	74%
Personal Interviews	Heavy	12	48%	4	29%	16	41%
	Frequently	10	40%	2	14%	12	31%
	Rarely	3	12%	5	36%	8	21%
	Never	0	0%	4	29%	4	10%

* Heavy usage - Nearly all of my students use it
Frequently used - Over half of my students receive it
Rarely use - Under half of my students receive it
Never used - Never given to students

FIGURE 7-5

Receivers of Information about Student Career Interest and Aptitude

	Senior High Counselors		Junior High Counselors		Total Responses for All Counselors	
	#	%	#	%	#	%
1. Students only	2	8%	3	20%	5	13%
2. Students and Parents	13	52%	8	53%	21	53%
3. Students, Parents upon request	10	40%	4	27%	14	34%
4. Parents only	0	0%	0	0%	0	0%
TOTALS	25	100%	15	100%	40	100%

Another question of importance to Sub-Committee Four was the delivery system of this generated career guidance data. Just how was the information on student career interest and aptitude delivered? Figure 7-6 shows the responses of the two groups.

Each counselor indicated the various methods of delivering career information that he used. Therefore, there are 66 total responses from the 40 counselors.

The most frequently cited delivery method was "printed material to take home" with nearly half (48%) the counselors using this method. The second most frequent method of delivery was "orally to the student" with 30% of the counselors mentioning it. Parents apparently are involved more frequently in the career guidance system with the senior high students than junior high students. Twenty-one percent of high school counselors give the information orally to both.

FIGURE 7-6

Delivery System for Information on Career Interest and Aptitude

Delivery System	Senior High Counselors		Junior High Counselors		Total Responses for all Counselors	
	#	%	#	%	#	%
1. Orally to the Student	13	30%	7	30%	20	30%
2. Orally to the Parent	0	0%	2	9%	2	3%
3. Orally to both	9	21%	1	4%	10	17%
4. Printed material to take home	19	44%	13	57%	32	48%
5. Printed material sent home	2	5%	0	0%	2	2%
TOTALS	43	100%	23	100%	66	100%

Counselor Suggestions for Career-Related Programs

Counselors were asked what career-related (instructional or guidance) programs, not now available, would they like to have added to their school's curriculum. This open-ended question had numerous positive responses. Listed below are the verbatim responses by the high school counselors.

1. "Career Education Program"
2. "Visitations to industry and parallel businesses"
3. "Counselor-visitation of local business and industry."
4. "A career unit in our 10th grade Health Program"

5. "Have experimental day or career day a yearly event"

7. "More field trips for career observation and participation"

8. "Lakeland speakers bureau on career-training-reach jr. high level--not seniors in high school--that's too late!"

9. "Printed handouts regarding job entry in Lake County"

10. "Regular guest speakers"

11. "More career information stressed by all classroom teachers"

12. "Taking interested students out to visit local industry and local business"

13. "A closer working relationship between school and community"

14. "Facilities expanded to provide extension of present program"

15. "Improvement of present facilities to allow for expansion of existing programs"

16. "GATB testing - Career Education K-12 - Additional Vo-Ed Programs"

17. "A group career guidance program working through the regularly scheduled classes"

18. "K-12 career orientation program"

19. "More up-to-date reference materials"

20. "Career Education course open to all students"

21. "Career information and decisions tied in more with each class"

22. "I would like to have complete exposure to all students on all career areas. Practical visits are always needed to follow up career oral presentation"

The junior high school counselors responded this way:

1. "Several good film/record or film/tape programs out from HEW - Occupational Outlook Handbook - We have very little at the junior high level"

2. "How effective if added to formal curriculum - We are hoping to develop some kind of informal, voluntary (in part) program based in part on testing information"

3. "Programs dealing with the decision-making processes"

4. "Programs designed to improve communication - understanding"

5. "Programs dealing with values structure"

6. "More career exploration opportunities worked into the curriculum within the disciplines"

7. "O.W.A. at junior high levels"

8. "Occupational Work Adjustment Program for junior high"

9. "More up-to-date films"

10. "More visitation to the business community"

11. "Career program for all 3 grades to help make better selection of job"

1 "Holland's Self-Directed Search (interest and personality inventory)"

13. "The Cronicle Occupational Library file and subscription service"

14. "D.O.T. 3 vol. set for about $15 from U.S. Printing Office"

15. "Simulated career kit - 20 simulation activities of career opportunities"

16. "More career time to utilize classroom situations"

17. "More valuable field trips for interested students in areas little publicized"

In addition to the suggestions listed above, the counselors were given a list of specific methods to improve cooperation with business and industry in the area of career information and exploration. They were asked to indicate whether they would like to see more cooperation using these methods. Their responses are listed in Figure 7-7.

Most counselors reacted favorably to the suggested activities; however, career days had only a 68% favorable response which was much less than any of the other categories. This suggests that this common vehicle for career guidance may no[illegible]n effective tool in the opinion of thirteen counselors.

FIGURE 7-7

Cooperation by Business and Industry in Career Information and Exploration - Counselor Approval

Activity	Percent of all Counselors Approving these Activities
Field Trips	91%
Guest Speakers	95%
Career Days	68%
Group Meetings with Counselors	85%
Group Meetings with Teachers	85%
Co-op Programs	85%

The General Program Student

What career information or career exploratory programs do the schools offer for the general student, who is neither vocational nor college bound? Both the Career Aspirations and Labor Market Needs Sub-Committees discussed this question which the businessmen particularly viewed as a problem. A question was included to counselors to determine this information. The validity of asking a question about special efforts to help the students in general programs seems supported by data in the student questionnaires in Chapter V. The survey results pointed out that the student in a general program is least likely to have made career plans. Fifty-nine percent of general students in 9-10-11 grades said they did not have definite career plans. The questionnaire was administered in late spring, so it is apparent that seniors in the general program probably had not defined their goal very well upon graduation from high school when compared to students in other programs. Also, 34% of seniors enrolled in the general program believed that their high school education hadn't prepared them for employment or continued education. In addition, general students make up 21% of underclassmen and 24% of seniors making the general program the second largest enrollment of all programs. A considerable opportunity for service to students in Lake County seems obvious.

Figure 7-8 points out that at least in the 13 schools represented by the counselor survey that junior high schools have more career information or exploratory programs for a general student than do high schools. Of importance is that 35% of respondents said they have no specific career information or exploratory programs for general students. If they indicated "yes" to this question, counselors were asked to explain the programs they had. Their responses were as follows:

1. "World of Work orientation in tenth grade."
2. "Career Exploratory Program in 10th grade."
3. "No programs as such in existance now, but we do have some printed information available and refer students to it."
4. "Use of GATB - Discussions and speakers are varied."
5. "We have a Career Ed. Program in our Bldg - A special teacher (Career Coordinator) takes care of this program."
6. "One day program for all juniors dealing with the world of work."
7. "Tenth grade Kuder Interest anc Career Investigation for vocational programs - Eleventh grade Career and College Unit."
8. "Career Education, OWA"
9. "Career counseling in conjunction with the Rotary Club - students meet in small groups with business, vocational, and professionals in their fields."

10. "We have career people from the community speak with interested students about their area of specialization, this is a weekly process."

11. "Opportunities are given to students to acquire information about any career from Counselors or Career Ed. Coordinator."

12. "We have several occupational books - film and film strips - speakers - field trips - etc. - plus a career staff now under state leadership."

13. "We have a file on occupations and some college materials. The high school has quite a few programs set up on the computer. We just need more materials to do an effective job. Quite a bit is done in OWA that is independent of guidance."

14. "We have printed material (Occupational Outlook Handbook and Chronicle Guidance Pamphlets) for many occupations that do not fit into these categories."

15. "Careers Week involving many speakers from many occupations. Chronicle Guidance File in the library. Unit in 9th grade social studies curriculum"

16. "Traditional - pamphlets, booklets, etc. Experimental - limited number of group activities dealing with values and decision making."

17. "Individual counseling and group counseling geared to all students."

FIGURE 7-8

Career Information and Exploratory Activities for the Student in a General Program

	High School Counselors		Jr. High School Counselors		Totals	
	#	%	#	%	#	%
Yes, we have these programs	14	56%	12	80%	26	65%
No, we do not	11	44%	3	20%	14	35%
TOTALS	25	100%	15	100%	40	100%

Chapter VIII CAREER OPPORTUNITIES

CHAPTER HIGHLIGHTS

*This chapter uses various secondary sources to project career opportunities from 1974-1985 on the national, state, and local levels.

*Service industries (non-manufacturing) have shown rapid growth and will continue to do so nationally and locally.

*The industries which will expand through 1985 will be health, government, international trade, manufacturing and retail trade. Those industries which will experience little growth are agriculture, construction and law.

*Although most sources project large increases in the demand for technicians (paraprofessionals) as compared to professionals and university graduates, the U.S. Department of Labor indicates demand for some paraprofessionals as mixed or uncertain.

*Job prospects through 1985 are good for accountants, some business managers, sales workers, secretarial-clerical, and medical-related. Modest growth is seen for craftsmen, self-employed managers, and engineering. The demand for teachers will be poor.

*A list of the major employers in Greater Cleveland and Lake County is provided.

*The historical shift in industrial employment for Cleveland and Lake County is presented in detail in Figures 8-5, 8-6, 8-7, 8-8, 8-9, and 8-10.

*Batelle Memorial Institute makes projections of employment changes through 2000 A.D. in Figures 8-11 and 8-12.

*The Ohio Department of Labor makes occupational projections for the next five years for Lake County in Figure 8-13.

This last chapter synthesizes a number of pertinent sources of data on careers. In a large measure, it is a reference guide which can be used in conjunction with other sources or activities in career guidance and program development. It is not intended as a self-sufficient guide to career trends. However, it does relate many interesting facts to students and educators.

OBJECTIVES

The objectives of this chapter are:

1. To review some historical data on trends in employment for Greater Cleveland and Ohio.
2. To review the major employers of Cuyahoga and Lake Counties.
3. To present a review of the current literature on occupational trends projections on the national level.

LIMITATIONS

However statistically sound the techniques of forecasting, future projections are fraught with limitations. Sets of assumptions are usually made, and the value of the forecast is only as reliable as the assumptions are correct. A careful reader should bear this in mind while reviewing the following material. John Dewey observed in 1897:

> With the advent of democracy and modern industrial conditions, it is impossible to foretell definitely just what civilization will be twenty years from now. Hence it is impossible to prepare the child for any precise set of conditions.[1]

Robert Hutchins supported Dewey's comment.

> If it is impossible to foretell definitely just what civilization will be twenty years from now, it is even more impossible--if there are degrees of impossibility--to foretell what any occupation will be at the end of that period, or even whether there will be any gainful occupations at all. It is, therefore, quite impossible to

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[1] "Progressive Education: The Ideal and the Reality," in The Teacher and the Taught, ed. Ronald Gross (New York: Dell Publishing Co., 1963), p. 143.

indicate in school the proper choice of a specialized pursuit in later life.[2]

Because of the problem of predicting job trends two decades in the future, this chapter will address itself primarily to predictions for the years 1980-85.

This concluding chapter attempts to provide some data on career opportunities, but it includes no primary data collected by the Citizens Advisory Committee or the Project Coordinator. This chapter, however, does include many excellent secondary sources from government and the literature on occupational trends. Obviously, the task of seeking out comprehensive data on careers is an awesome job and beyond the scope of the Lake County Career Opportunities Study. For example, the Dictionery of Occupational Titles lists over 22,000 job classifications! However, this chapter reviews many major job classifications and reports job trends based on reliable input from the literature. Students, parents, and educators are urged to make an exhaustive search for information including talks with people having considerable experience in a particular occupation. Realistically, however, information on occupational trends is not enough. A career selection should be based most importantly on personal interest and aptitude than on data on career opportunities.

THE ASSUMPTION OF ECONOMIC PROSPERITY

Currently, the United States is in an economic recession which obviously has implications for the availability of jobs. An assumption built into nearly every source below is predicated upon a stable economy with a growth rate of 3-4%. This assumption should temper some of the projections cited below if the present economic recession extends into 1976. Ironically, the first Lake County Career Opportunities Study was also conducted during the recession of 1968-69, a recession which caused problems with occupational projections.

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[2] Robert M. Hutchins, The Learning Society, Praeger Publishing Co., 1968. p. 94.

PREPARATION FOR CAREERS

In September of 1973, the Carnegie Commission on Higher Education declared that more people are going to college than the job market of the future can absorb.[3] Further, the Commission called for colleges to create alternatives to traditional college education, one which stressed more responsibility and accountability for a student's ultimate employment. One answer may be a greater emphasis on vocational and technical education, a topic already discussed in Chapter VII. Of course, change is often a slow process hindered by a number of factors. For example, the first annual report of the National Advisory Council on Vocational Education reported that the attitude which maintains that "vocational education is designed for somebody else's children is at the heart of the resistance to vocational and technical education."[4] Educators have certainly reacted slowly as well to the "career" orientation of educational programs. But for the most part, there is a growing belief among the general public that schools should be more "accountable" for their services.[5] At the heart of this new attitude is what Muriel Lederer states in her new book - that education should lead to a job.[6] If this is accurate, then marketable job skills should be of a major importance to the educational effort and teachers should be aware of the manner in which their subjects contribute to career preparation. Teachers should also be appraised of career trends because educators could perform a much needed career advisory function in the classroom. (See Chapter VII.)

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[3] Bud Weidenthal, "Says Educators Ignore Carnegie Report," The Cleveland Press, September, 1974, Tabloid, p. 1.

[4] Annual Report, National Advisory Council on Vocational Education, (July 15, 1969). U.S. Department of Health, Education and Welfare. p. 1.

[5] John Roueche and Barton R. Herrscher, Toward Instructional Accountability, Westinghouse Learning Press, 1973, pp. 192-209.

[6] Vivian Brown, "Education Should Lead to Jobs Says Author of Career Guide," The News Herald (November 17, 1974). p. 2B.

FUTURE NATIONAL AND STATE OPPORTUNITIES - SELECTED INDUSTRIES

The industry trends on the national and state level are of some importance to students. Even though they are not as pertinent as local data, it does signal opportunities and trends. In this chapter, nine selected industries are reviewed based on national and state growth potential through 1985. The basic source is the U. S. Department of Labor and the Occupational Outlook Handbook, 1974-75 Edition.

The Service Industries

The service industries have been one of the fastest growing industries in the United States and Ohio.[7] The category should increase by at least 55% or six million jobs by 1985 nationally.[8]

One often mentioned trend in employment is to a greater portion of our labor force on a national level being employed in the service industries. Production workers in U. S. Manufacturing increased by only 10% between

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[7] Occupational Outlook Handbook, 1974-75 ed. Washington: U.S. Department of Labor, U.S. Government Printing Office, 1974. Also see William Papier, "Recent Trends in the Ohio Labor Market, Akron Business and Economic Review, Fall, 1971, p. 16. and N. H. Rosenthal, "The United States Economy in 1985: Projected Changes in Occupations," Monthly Labor Review. December, 1973. p. 18.

[8] Herb Bienstock, "Current Trends in the World of Work," Business World, Spring, 1974, p. 2. and Employment Outlook for Tomorrow's Jobs, Bulletin 1785-1, U. S. Department of Labor, p. 3.

1947 and 1967 whereas non-production workers increased 200%.[9] There seems to be some confusion over the exact definition of what constitutes a "service" industry. For example, is a retailer providing a service in the same sense an accounting firm or a bank does? Defined broadly, a "service" does not include those basic industries which produce goods. Using this definition as a base, we discovered that in 1969 53% of the U.S. work force (38 million persons) were imployed in the "services." In addition, almost 40% of all personal spending in the U. S. A. goes for services of various sources.[10]

Looking to the future it should be noted that the growth potential of the service industries depends on a great many factors that can't be entirely controlled. Services, and personal services in particular, compete with services that can be provided within the home if necessary. The state of this sector of the economy, then, depends in large measure on the general state of the economy, and it is apt to be affected more critically than other sectors when economic activity slows down. Given our current economic recession it is likely this sector would show a temporary decline.

Agriculture

The historical productivity achievements in agriculture on a national, state and local level have an inevitable affect on employment. As machines replace people, there has been a steady decrease in agricultural employment and all sources project a continued decrease by as much as 45% through 1985.[11]

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[9] Greater Cleveland Growth Association, Research and Planning Department

[10] Lyman A. Keith and Carlo E. Gubellini, Introduction to Business Enterprise, McGraw-Hill Book Co., 1971. p. 67.

[11] Papier, op. cit. p. 16, Rosenthal, op. cit. p. 21, and Employment Outlook for Tomorrow's Jobs, op. cit. p. 4.

Construction

On a national level construction is the only goods-producing industry expected to show a quickened pace of employment.[12] However, between 1961-1971 construction was the only non-manufacturing Ohio industry to show a significant loss, dropping nearly 13,000 workers from its 1969 record level of 176,000 workers.[13] The current recession has hurt the Ohio construction industry.

Government

Nationally, government employment has grown faster than any other industry with nearly a 60% growth since 1960.[14] Government should continue to show strong growth and be a major source of new jobs through the mid-1980's.[15] This should be characteristic of Ohio as well where employment in government has had a steady increase since 1951.[16] However, the all-time high for government services was in 1969. Government is the third largest source of employment in Ohio behind manufacturing and retailing.[17]

Health

Demand for health workers should be great through 1985. Physicians, dentists, practical and registered nurses, veterinarians, medical laboratory workers, biomedical equipment technicians, and other medical technicians should receive considerable opportunities.[18] In fact, the most urgent occupational demand will continue to be in the health fields.

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[12] "Where the Jobs Will Be?" Nations Business, March, 1972, p. 45.

[13] Papier, op. cit., p. 15.

[14] Employment Outlook for Tomorrow's Jobs, op. cit. p. 3.

[15] David J. Reed and Donald Sternitzke, "A Component Analysis of Employment Changes in Ohio: 1962-1971," Akron Business and Economic Review, Spring, 1974, p. 3.

[16] The Ohio Economy: A Review and Outlook, Department of Economic and Community Development, State of Ohio, 1974.

[17] Papier, op. cit. p. 15.

International Trade

One of the lesser-known but important career-related facts is that in 1971 Ohio moved into the national lead in the number of manufacturing jobs related to exporting. Ohio has nearly 68,000 of these jobs. Significantly, Ohio has progressed from fourth to second place in terms of dollar value of exported manufactured products.[19] As a result, The Cleveland State University has recently established a World Trade Center Research Center to serve the growing need of Cleveland's fledging World Trade Center. Opportunities will probably exist for occupational placement and growth in this industrial trade.

Law

There is some evidence that law school graduates are not enjoying the job opportunities they once had. On the national level, the June 1972 graduating law classes was nearly double what it was in 1965. It is predicted by one source that shortage of legal jobs for graduates will not be a temporary problem.[20] The lack of consensus on the potential of legal careers suggests further research by students and counselors.

Manufacturing

On a national level manufacturing will remain the biggest source of jobs in the U. S. but will provide them at a slower rate than the sixties.[21]

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[18] Bienstock, op. cit., p. 2. and "Where the Jobs Are," Mechanics Illustrated, April, 1973, p. 52.

[19] The Ohio Economy op. cit., p. 38.

[20] "Too Many Lawyers for Too Few Firms," Business Week, June 3, 1972, p. 21.

[21] "Where the Jobs Will Be," op. cit., p. 46.

Manufacturing is the largest single source of employment in Ohio.[22] Also, Ohio is fifth in the U.S. in the value of manufactured products. Although the industry growth rate is modest, there should be considerable growth in absolute numbers to 1985.

Retail and Wholesale

The historical trend from 1961 to the present shows a strong growth rate.[23] Three of every four workers in this classifaction are employed in retailing in Ohio. Retailing itself is the second largest source of employment in Ohio with nearly 600,000 workers. Retailing is a fast growth industry nationally, but the rate will be slowed between 1980-1985.[24]

FUTURE NATIONAL & STATE OPPORTUNITIES SELECTED OCCUPATIONS

The growth projections of major occupational groups on a national and state level are the subject of this section. The most authoritative source is the Bureau of Labor Statistics. Figure 8-1 relates its projections through 1985.

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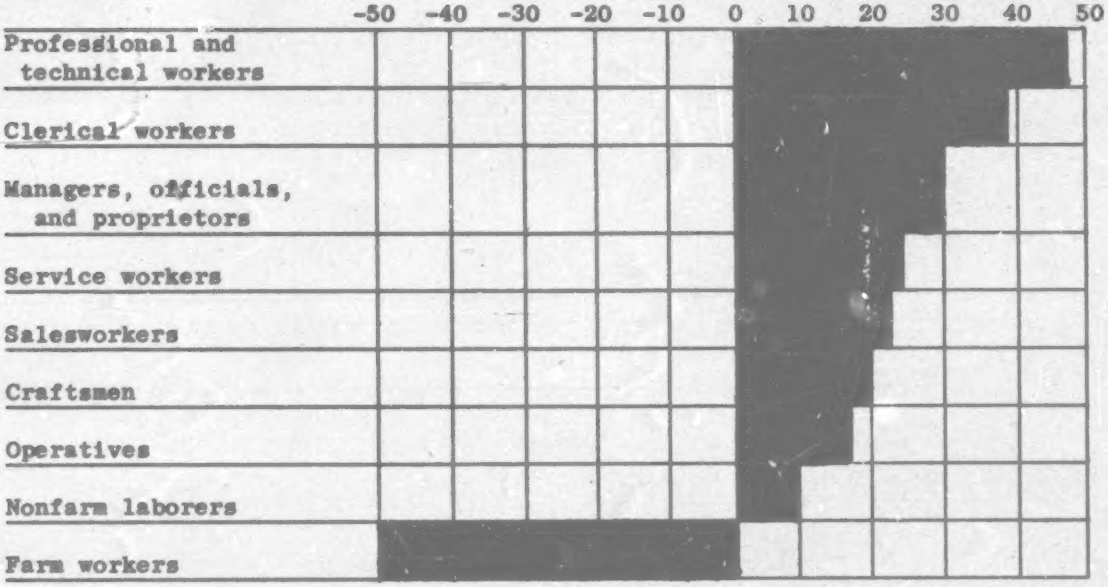
[22] Reed and Sternitzke, op. cit., p. 28.

[23] Papier, op. cit., p. 16.

[24] Reed and Sternitzke, op. cit., p. 31.

FIGURE 8-1

Percent Change In Employment 1972-85



Source: Bureau of Labor Statistics

Technical (Paraprofessional) Careers

In the spring of 1974 Governor Gilligan stated that "75% of all jobs during the next decade will require adequate preparation in vocational or technical schools. Only 20% will require a four year college degree."[25] The Governor was echoing one of the major trends in career opportunities; the rapidly expanding demand for technicians, often called paraprofessionals. The Carnegie Commission on Higher Education also projects growing demand for the technician.[26]

Technical jobs are professional-support jobs. The technician does tasks typically performed by professionals but requiring less theoretical knowledge and a narrower range of skills. The professional supervises the work of the technician. The duties assigned a para-professional may fall just short of full professional responsibilities or they may be largely clerical in nature.[27] Examples of technicians are legal assistants, engineering technicians, dental hygenists, teacher's aids, physical therapy assistants, social work aides, and accounting technicians.

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[25] Weidenthal, op. cit., p. Tabloid 1.

[26] Ibid.

This is a very young career field with most specific occupations emerging only since the mid-1960's. They developed in response to a lack of professionals in these fields.

Training for para-professionals originally took place on-the-job. Recently, however, community colleges, technical colleges, and private business and technical colleges have become a major training ground. For instance, Lakeland Community College has many technical programs including engineering, law enforcement, data processing, nursing, retailing, and others. These programs are listed in Chapter IV.

According to the U.S. Department of Labor, the prospects for para-professionals are uncertain.

> Job prospects in the newer and still-emerging paraprofessions are very uncertain. Currently, very few persons are employed in some of these jobs. For example, a committee of the Association for Counselor Education and Supervision reports that only 22 school districts employed counselor support personnel in January 1970, and the number of such paraprofessionals totaled only 137. Similarly, a report on the role of the accounting technician prepared for the American Institute of Certified Public Accountants says "While there are indications that technicians are acceptable in public accounting firms, there are few instances in which they have been accepted."
>
> Professional associations within the fields of law and architecture have no estimates of paraprofessional employment nationally in these fields.
>
> The number of opportunities that will arise in the newer paraprofessions in the next few years may well depend on factors such as the success of attempts by professional associations, schools, and other agencies to promote the concept of paraprofessionalism; employers' willingness to hire paraprofessionals and their experiences with those hired; and professional manpower supply and demand.

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[27] Gloria Stevenson, "The Paraprofessionals," Occupational Outlook Quarterly, Fall, 1973, p. 4.

Paraprofessional job prospects probably will be brightest in fields where professionals are in short supply and where the demand for professional services is increasing. Employment of physician's assistants, legal assistants, and accounting technicians could grow as a result of these factors.[28]

Accountants

On a national level most sources predict a good increase through 1980 in demand for accountants.[29] The greater use of accounting information in business management, changing tax systems, and revised methods of financial reporting should increase the demand for accountants.[30] The best prospects are for graduates of university level business administration programs in that very few accounting technicians (usually two year degree) have been employed in this job category to date.[31]

Craftsmen

Even though craftsmen numbered nearly eleven million in 1972, various technological developments will tend to limit expansion of this area.[32] Craftsmen, in general, will experience a lower growth rate than the average for all occupations between 1972 and 1985. Industrial and construction growth obviously has a major impact on the demand for craftsmen.[33]

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[28] Ibid, p. 4.

[29] "Where the Jobs Are," op. cit., p. 52. "Job Guide for the Next Ten years," *U.S. News and World Report*, June 15, 1970, p. 54. "Job Outlook for College Grads: Now to 1980," *Changing Times*, July, 1973, p. 4. "Where the Jobs Will Be in the Future," *U.S. News and World Report*, July 1, 1974, p. 62. "Where the Jobs will be in the 70's: Exerpts from a Survey by the U.S. Department of Labor," *U.S. News and World Report*, September 6, 1971, p. 69.

[30] "Where the Jobs Will be in the Future," op. cit. p. 62.

[31] Stevenson, op. cit., p. 8.

[32] *Employment Outlook for Tomorrow's Jobs*, op. cit., p. 6.

[33] Rosenthal, op. cit., p. 20.

Managers, Officials, Proprietors

This occupational group is projected to increase by 2.5 million jobs between 1972 and 1985.[34] The growth rate should be much higher than in the past. Currently, the demand for managers is mixed.[35] The demand for retail managers (40% of the total category) should slow down between 1980 and 1985.[36] The number of self-employed managers should decline as the trend toward larger firms continue. Nevertheless, there will be a strong demand for managers in financial services (banking, insurance, consumer finance) with a financial and selling backgrounds.[37]

Professional and Technical

On a national most sources predict an enourmous increase in this area. The U. S. Department of Commerce projected a 50% increase (5.2 million jobs) in this category between 1968-1980. Currently this is the third largest occupational group.[38] One source suggested this occupational group will increase faster than all others, increasing by 5.5 million workers between 1972 and 1985.[39]

Engineering will have a brighter job outlook than in the 1969-1972 time period.[40] The oversupply of engineers has been one of the most publicized oversupply area. There have been several conflicting articles on the demand for engineers with most predicting a modest increase through 1985.

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[34] Ibid, p. 19.

[35] "Who's Hiring?," MBA, July/August, 1974, p. 14.

[36] Rosenthal, op. cit., p. 19.

[37] "Who's Hiring?," op. cit., p. 14.

[38] Employment Outlook for Tomorrow's Jobs, op. cit., p. 5.

[39] Rosenthal, op. cit. p. 16.

[40] Betty Vetter, "Assessing the Demand for Scientists and Engineers," Science, April 5, 1974. "Job Prospects for Engineering and Technology Graduates 1973 and 1974," Engineering Manpower Bulletin, October, 1973. "Where the Jobs Are," op. cit., p. 52.

Sales Workers

Sales workers include those in retail stores, wholesalers, real estate firms, manufacturers, etc. There will be an increase of 20% between 1972 and 1985 nationally.[41] The expansion of wholesale and retail trade will increase at a slower rate than total employment overall due mainly to changing techniques in merchandising.[42] Retail sales workers make up half of the total in this group. There should be a strong demand for manufacturers salesmen with college degree holders standing the best chance.[43]

Secretarial-Clerical

Most projections suggest a favorable increase in the U. S. demand for secretarial and clerical jobs.[44] The U. S. Department of Labor projected a 35% increase (4.5 million) between 1968 and 1980. In 1972 clerical workers (including workers who operate computers, keep records, take dictation, type, and operate machines) make up the largest group of workers.[45] Computer programing will experience a very rapid employment growth rate.

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[41] Employment Outlook for Tomorrow's Jobs, op. cit., p. 6.

[42] Rosenthal, op. cit., p. 18.

[43] "Where the Jobs Are," p. 53.

[44] "Brighter Demand for Office Help," Business Week, July 3, 1971, p. 15. Rosenthal, op. cit., p. 18.

[45] Rosenthal, op. cit., p. 19.

Teaching

Perhaps one of the best known areas of oversupply exists in educatio The most thorough study on this problem has been done by the National Education Association (NEA). It concluded that the peak surplus would occur in 1974 with an estimated 234,000 graduates looking for 111,000 jobs.[46] Even though the surplus will decrease, it is expected to continue through 1980.

THE MAJOR EMPLOYEES IN THE CLEVELAND SMSA AND LAKE COUNTY

Relevant to our review of the career opportunities is an inventory of the largest metropolitan employers in business and industry. Greater Cleveland is a diversified labor market with no more than 17% of the labor force in any one industry. As indicated in chapter two, Cleveland is a major industrial market ranking sixth in manufacturing employment and fifth in industrial shipments. There have been component changes in relative share of total employment as pointed out later in this report.

The fact that Greater Cleveland is a major corporate headquarters town is something well known to businessmen but lesser known to laymen, students and educators. Figure 8-2 not only reviews the firms in the industrial sector but those in finance, insurance, real estate, utilities engineering, law, accounting, advertising, retail, and the non-profit institutions.

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[46] Jack McCurdy, "America's Demand for Teachers Drops Sharply," The News Herald, November 22, 1974, p. 20.

FIGURE 8-2

HEADQUARTERS CITY U.S.A.

Fortune magazine lists 41 of the top 1000 industrial corporations in the U.S. headquartered in Greater Cleveland. In fact, on a per capita basis, there are more of those 1000 headquartered in Cleveland than in any of the top 25 cities in the United States — including New York and Chicago.

The 41 are:

Goodyear Tire & Rubber
Firestone Tire & Rubber
TRW
Standard Oil (Ohio)
Republic Steel
B. F. Goodrich
Eaton
General Tire & Rubber
White Motor
White Consolidated
Diamond Shamrock
Sherwin-Williams
Addressograph-Multigraph
A-T-O
Harris-Intertype
Reliance Electric
Midland-Ross
Lubrizol
Hanna Mining
Parker-Hannifin
Scott & Fetzer
Ferro
Bobbie Brooks
American Greetings
Work Wear
Warner & Swasey
McNeil
Medusa Corporation
Mohawk Rubber
American Ship Building
Van Dorn
Cleveland-Cliffs Iron
Weatherhead
Acme-Cleveland
Shelter Resources
Lamson & Sessions
Cole National
Standard Products
Curtis Noll
North American Coal
Park-Ohio Industries

- The following non-industrial corporations headquartered in Greater Cleveland are also listed by Fortune Magazine:

The Cleveland Trust Company and National City Bank are among the top 50 largest banks in the United States.

Cook United and Fisher Foods are in the top 50 list of the largest retailing companies in the country.

The Chessie System, Roadway Express and Leaseway Transportation are among the top 50 transportation companies.

Ohio Edison is one of the 50 largest utilities in the nation.

Additionally the Cleveland area has:

- Divisional headquarters of major industrial corporations including:

Glidden-Durkee (SCM) major divisions of Gould, Inc. ESB, Inc. United States Steel Bailey Meter Stouffer Foods J & L Steel Aluminum Co. of America Joseph & Feiss Towmotor Otis Material Handling General Electric Lamp (Nela Park) Picker Corp. Richman Bros. Union Carbide General Motors Harshaw Chemical Chase Brass & Copper Ford Motor and Pickands Mather.

- Other major financial, insurance, and real estate corporate headquarters including:

Union Commerce Bank
Society Corporation
Central National Bank
Broadview Savings & Loan
Cleveland Federal Savings & Loan
Third Federal Savings & Loan
Cuyahoga Savings
Womens Federal Savings
Second Federal Savings
Sun Finance and Loan
Midwestern National Life Insurance
Progressive Corporation
Medical Life Insurance Co.
U.S. Realty Investments
First Union Realty
W. F. Ryan Corp.
Mellon National Mortgage Co. of Ohio
Ostendorf-Morris
Citizens Financial
Prescott-Ball-Turben
Fulton, Reid and Staples
McDonald and Co.
Shaker Savings
Union Savings
Ohio Savings
Cragin, Lang, Free, & Smythe
T. W. Grogan Co.
Union Financial
Land Title Guarantee and Trust
Kleist Development Co.

- Other major utility and transportation firms with national or regional headquarters including:

Cleveland Electric Illuminating Ohio Bell East Ohio Gas Greyhound-East Lines United Airlines American Airlines Norfolk & Western and Erie Lackawanna.

- Other major non-industrial corporate headquarters including:

Design-engineering-construction-architectural firms like Dalton-Dalton-Little-Newport H. K. Ferguson Austin Co. Arthur G. McKee Co. McDowell-Wellman Engineering Co. and H W H Associates.

Major law firms with the main or major offices including: Squire, Sanders and Dempsey Jones, Day, Cockley & Reavis Baker, Hostetler & Patterson Thompson, Hine & Flory Arter, Hadden, Calfee, Halter, Griswold Burke, Haber & Berick Ulmer, Berne, Laronge, Glickman & Curtis and Hahn, Loeser, Freedheim, Dean & Wellman.

Accounting firms with corporate or major offices including: Ernst & Ernst, Arthur Andersen Price, Waterhouse Haskins & Sells Cooper & Lybrand Peat-Marwick-Mitchell and Laventhol, Krekstein, Horwath & Horwath.

Advertising agencies with corporate or regional headquarters Including: Meldrum & Fewsmith, Lang, Fisher & Stashower, Marschalk Griswold-Eshelman Watts, Lamb, Kenyon & Herrick Fuller, Smith & Ross Carr Liggett Wyse Dix & Eaton Palm & Patterson Bayless Kerr and Jayme Organization.

- Other major industrial and non-industrial firms with corporate or regional headquarters including:

Higbee's May Co. Halle's Sears, Roebuck Revco D.S. Forest City Central Data Systems Plain Dealer Cleveland Press Oglebay Norton George Worthington National Cash Register IBM McKinsey & Co. Westinghouse Electric Penton Publishing ITT Service Industries Chi Corporation MCI Telecommunications and C-E Architectural Products.

- Non-profit and governmental institutions with major administrative offices including:

Federal Reserve Bank of Cleveland
Case Western Reserve University
Cleveland State University
Cuyahoga Comunity College
American Society for Metals
American Metal Stamping Assn.
Forging Industry Association
Gray & Ductile Iron Founders Society
Industrial Fasteners Institute
Malleable Founders Society
National Flexible Packaging Assn.
National Screw Machine Products Assn.
Potato Chip Institute International
Steel Founders Society of America
Steel Service Center Institute
Smaller Business of America Inc.
Lake Carriers Association
Baldwin Wallace
John Carroll
Local, State and Federal Government

Source: Greater Cleveland Growth Association, Research and Planning Department, (3/74).

The number of employees of each firm is a significant factor, because this gives some indication of opportunities both at the job entry and vertical mobility levels. The top industrial employers of Greater Cleveland are the subject of Figure 8-3.

FIGURE 8-3

The Top Industrial Employers in Cleveland

Ford	14,000
General Motors	13,500**
Republic Steel*	9,900
General Electric	8,300
TRW*	7,100
Jones & Laughlin Steel	5,000
Eaton*	4,300
White Motor*	3,900
Gould	3,400
Acme-Cleveland*	3,300
Addressograph-Multigraph*	3,100
Standard Oil (Ohio)*	3,000
Bailey Meter*	2,700
U.S. Steel	2,700
Sherwin-Williams*	2,600
American Greetings*	2,500

Note: Six retailers--Cook United*, Sears, Fisher Foods*, Higbee*, May Co., and Halle Bros.--employ a total of 24,000. Ohio Bell Telephone employs 10,500, and Cleveland Electric Illuminating*, the power utility, employs 3,700.

*Headquartered in Cleveland metro area.

**Includes 2,000 in Lorain County.

Source: Greater Cleveland Growth Assn. Sales Management

Only one of the top industrial employers in Greater Cleveland is also a major employer in Lake County. Since 47.9% of the Lake County labor force is in manufacturing, it is important to identify the leading firms in the field. The industrial employers with over two hundred employees in Lake County are presented in Figure 8-4.

FIGURE 8-4

The Largest Industrial Employers in Lake County

S. I. C. Code		# of Employers
3537	Towmotor (Mentor)	2,200
2253	Dalton-Cleveland (Willoughby)	2,000
3481	Universal Metals (Wickliffe)	1,900
3494	Parker-Hannifin (Wickliffe)	1,500
3821	Bailey Meter (Wickliffe)	1,320
2812	Diamond Shamrock (Painesville)	1,130
2899	Lubrizol (Wickliffe)	1,050
3069	Ohio Rubber Co. (Willoughby)	1,000
2823	IRC Fibers (Painesville)	900
3481	W. S. Tyler (Mentor)	700
3433	Dornback Furnace (Willoughby)	561
3452,3429	Curtis-Noll (Eastlake)	500
2821	Uniroyal (Painesville)	452
3553	Coe Manufacturing (Painesville)	400
3499	Seeburg Corporation (Eastlake)	375
3713	R. W. Sidley (Painesville)	375
3494	Fluid Controls (Mentor)	300
3295	General Electric (Willoughby)	275
3545	Pipe Machinery (Wickliffe)	270
2329	Rapid American (Painesville)	250
3679	Bud Radio Inc. (Willoughby)	200
3391	Dyson (Painesville)	200
3545	Kennametal (Willoughby)	200

*Standard Industrial Classification Code

Source: 1974 Directory of Ohio Manufacturers, Ohio Department of Economic and Community Development, Columbus, Ohio.

HISTORICAL CHANGES IN INDUSTRY EMPLOYMENT-CLEVELAND SMSA AND LAKE COUNTY

The literature on careers is filled with projections on job trends and occasionally sources will differ with each other. This section will contain a list of career fields with some generalizations about trends (or conflicting data) nationally and locally.

Because the economy and therefore most occupational opportunities are tied closely to Cuyahoga County, it is logical to begin a discussion of job trends with specific historical data. Figures 8-5, and 8-6, give a good indication the employment changes between 1965 and 1973 in the

Cleveland SMSA (Cuyahoga, Lake, Medina and Geauga Counties).

The Division of Research and Statistics of the Ohio Department of Labor has compared employment changes in Cleveland to the changes in other Ohio cities. This is reported in Figure 8-7.

Services and Manufacturing

There has been an increase of service industry employment in Greater Cleveland. Between 1965-1973, the number of service workers in the area grew from 58% to 64% of the labor force with retail and wholesale trade, banking, and state and local government showing the most impressive gains. During that same period, manufacturing employment declined to 32% of the labor force. Figure 8-5 and 8-6illustrate the growth of these two areas of employment between 1965 and 1973.

There has been a growth of the "service" industries in Lake County. Non-production occupations increased 62.4% between 1960 and 1970. This is double the Ohio average (See Figure 8-10). This compared to the 40.5% increase in Lake County manufacturing employment (nearly four times the state average) and a 34% increase in construction employment (double the state average). Of course the rapid population and industrial growth in Lake County have been the major factors in this growth.

CLEVELAND SMSA INDUSTRY PROJECTIONS, 1970-2020

The Battelle Memorial institute has projected the number of employed persons by industry group in Greater Cleveland through the year 2020.(35) This report shows a change in the share of jobs by industry. Those showing important increases in share are services and trade, which will gain at the expense of manufacturing and agriculture. (Figure 8-11)

FIGURE 8-5

Components of Employment Change 1965-1973 = Gains (+), Losses(-)
Cleveland SMSA

Employment Category	Employment Change (thousands)	Percent Change
Non Manufacturing	(+) 100.9	(+) 20.5
Total Employment	(+) 88.3	(+) 11.2
Service & Miscellaneous Industries	(+) 40.5	(+) 37.4
Wholesale & Retail Trade	(+) 29.1	(+) 17.2
Local Government	(+) 26.4	(+) 39.1
Total Government	(+) 24.2	(+) 24.8
Retail Trade	(+) 21.1	(+) 17.7
Wholesale Trade	(+) 7.9	(+) 15.9
Finance, Insurance, Real Estate	(+) 7.9	(+) 22.0
Communications, Utilities	(+) 3.3	(+) 20.4
Banking	(+) 3.3	(+) 39.3
State Government	(+) 2.8	(+) 65.1
Construction Machinery	(+) 1.0	(+) 12.8
Chemicals	(+) 1.0	(+) 6.7
Blast Furnaces, Steel Mills	(+) .9	(+) 5.7
Insurance Carriers	(+) .9	(+) 8.9
Transportation and Utilities	(+) .8	(+) 1.9
Iron, Steel Foundries	(+) .8	(+) 11.1
Nonferrous Foundries	(+) .8	(+) 19.5
Primary Metal Industries	(+) .7	(+) 2.2
Metalworking Machinery	(+) .5	(+) 2.9
Machinery, Non Electrical	(+) .2	(+) .04
Paper and Allied Products	(+) .2	(+) 3.8
Industrial Chemicals	(+) .2	(+) 3.7
Mining and Quarrying	0.0	0.0
Special Industrial Machinery	(-) .2	(-) 3.4
Metal Stampings	(-) .2	(-) 1.4
Printing and Publishing	(-) .3	(-) 1.8
Fabricated Structural Metal Products	(-) .4	(-) 6.9
Apparel, Finished Products	(-) .6	(-) 7.4
Beverage Industries	(-) .6	(-) 25.0
Furniture and Fixtures	(-) .8	(-) 20.5
Textile Mill Products	(-) 1.0	(-) 18.5
Bakery Products	(-) 1.2	(-) 27.3
General Industrial Machinery	(-) 1.3	(-) 20.3
Contract Construction	(-) 1.6	(-) 5.0
Electrical Machinery, Supplies	(-) 1.7	(-) 5.5
Electrical Industrial Apparatus	(-) 1.8	(-) 10.4
Screw Machine Products	(-) 1.9	(-) 19.8
Motor Vehicles and Equipment	(-) 2.6	(-) 8.9
Non Durable Goods	(-) 3.3	(-) 4.2
Fabricated Metal Products	(-) 3.5	(-) 7.8
Food Products	(-) 4.1	(-) 29.3
Federal Government	(-) 5.0	(-) 19.5
Transportation Equipment	(-) 5.0	(-) 12.6
Durable Goods	(-) 9.3	(-) 4.1
Manufacturing	(-) 12.6	(-) 4.2

Source: Ohio Bureau of Employment Services

FIGURE 8-6

EMPLOYMENT CHANGES 1965-1973 BY INDUSTRY (in thousands)

Cleveland Standard Metropolitan Stastical Area

INDUSTRY	1965	1966	1967	1968	1969	1970	1971	1972	1973
TOTAL	791.8	830.0	839.8	863.2	885.5	848.5	837.3	857.3	880.1
MANUFACTURING	300.1	318.7	310.7	314.1	314.0	281.8	270.2	279.9	287.5
DURABLE GOODS	222.3	239.0	231.9	234.9	234.4	204.8	195.9	205.0	213.0
Furniture and Fixtures	3.9	4.1	3.8	3.7	3.7	3.1	3.2	3.0	3.1
Primary Metal Industries	37.8	40.5	38.6	38.1	40.3	35.3	33.2	35.8	38.5
Blast Furnaces and Steel Mills	15.9	17.7	18.0	16.7	18.1	16.6	14.9	16.7	16.8
Iron and Steel Foundries	7.2	7.2	7.6	6.6	6.9	6.1	6.1	6.6	8.0
Nonferrous Foundries	4.1	4.3	4.0	4.4	4.6	3.7	4.0	4.3	4.9
Fabricated Metal Products	44.7	46.0	44.3	45.6	45.4	39.8	38.8	41.2	41.2
Fabricated Structural Metal Products	5.8	5.9	5.8	5.4	5.4	4.9	4.7	5.0	5.4
Screw Machine Products and Fasteners	9.6	10.6	10.2	10.3	9.9	7.9	7.9	8.3	7.7
Metal Stampings	14.0	13.7	13.3	14.6	14.8	14.0	13.2	14.2	13.8
Machinery, Except Electrical	49.4	53.1	51.9	52.3	52.9	44.9	44.3	46.8	49.6
Construction, Mining, Conveying Mach.	8.2	8.6	7.9	8.5	8.6	8.0	7.6	8.5	9.2
Metalworking Machinery	16.9	18.1	19.1	18.4	19.0	14.5	14.5	15.5	17.4
Special Industry Machinery	5.8	6.2	5.9	5.8	5.5	5.5	5.3	5.5	5.6
General Industrial Machinery	6.4	6.6	6.4	5.3	5.5	4.9	4.7	4.9	5.1
Electrical Machinery, Supplies	30.6	33.7	33.4	33.2	30.6	29.2	27.6	28.2	28.9
Electrical Industrial Apparatus	9.3	10.1	9.9	9.8	9.7	8.5	7.5	7.4	7.5
Transportation Equipment	39.7	41.8	39.4	41.0	40.6	35.3	32.6	33.5	34.7
Motor Vehicles and Equipment	29.3	29.7	27.0	28.9	30.3	27.0	25.9	26.5	26.7
NONDURABLE GOODS	77.8	79.7	78.8	79.2	79.6	77.0	74.2	74.9	74.5
Food and Kindred Products	14.0	13.8	13.7	13.2	12.8	12.3	10.9	10.4	9.9
Bakery Products	4.4	4.0	4.1	4.1	4.0	3.7	3.4	3.4	3.2
Beverage Industries	2.4	2.5	2.5	2.5	2.6	2.6	1.9	1.8	1.8
Textile Mill Products	5.4	5.1	4.7	5.0	4.7	4.6	4.7	4.8	4.4
Apparel; Other Finished Fabric Products	8.1	8.3	7.6	7.8	7.8	7.7	7.5	7.5	7.5
Paper and Allied Products	5.2	5.5	5.5	5.6	5.4	5.4	5.3	5.1	5.4
Printing, Publishing, Allied Industries	16.7	17.4	17.9	17.2	17.6	16.9	16.2	16.0	16.4
Chemicals and Allied Products	15.0	16.3	16.4	16.6	17.1	16.8	15.9	16.2	16.0
Industrial Chemicals	5.4	6.0	5.8	5.6	6.0	6.1	5.7	5.6	5.6
NONMANUFACTURING	491.7	511.3	529.1	549.0	571.4	566.7	567.2	577.4	592.6
MINING AND QUARRYING	1.3	1.4	1.5	1.5	1.5	1.6	1.6	1.4	1.3
CONTRACT CONSTRUCTION	31.6	30.5	34.0	36.2	36.8	30.3	29.5	28.6	30.0
TRANSPORTATION AND UTILITIES	48.0	49.9	49.4	50.8	51.4	50.1	49.2	49.1	48.8
Communication, Electric, Gas Services	16.2	16.8	17.3	17.9	19.1	19.8	20.0	19.7	19.5
WHOLESALE AND RETAIL TRADE	169.0	175.2	178.6	184.9	195.0	190.7	190.6	194.3	198.1
Wholesale Trade	49.8	50.7	51.4	53.8	55.5	55.7	56.4	56.5	57.7
Retail Trade	119.2	124.5	127.2	131.2	139.5	135.0	134.1	137.8	140.3
FINANCE, INSURANCE, AND REAL ESTATE	35.9	36.3	38.3	39.6	40.8	42.0	42.3	42.8	43.8
Banking	8.4	8.8	9.3	9.9	10.8	11.2	11.1	11.1	11.7
Insurance Carriers	10.1	10.0	10.4	10.4	10.6	11.0	11.3	10.8	11.0
SERVICE AND MISCELLANEOUS INDUSTRIES	108.4	114.3	120.0	127.4	134.5	136.7	139.1	144.7	148.9
GOVERNMENT	97.5	103.7	107.3	108.6	111.4	115.3	115.0	116.5	121.7
Federal Government	25.6	27.3	26.1	24.1	22.6	22.5	21.1	20.7	20.6
Local Government (Includes Schools)	67.6	71.7	75.8	78.8	82.6	86.4	87.0	88.6	94.0
State Government (Includes Schools)	4.3	4.7	5.4	5.6	6.1	6.5	6.9	7.2	7.1

Sources and Notes: Nonagricultural employment for December of each year unless otherwise indicated; Ohio Bureau of Employment Services (OBES). (4/74)

Greater Cleveland Growth Association

Research and Planning Department (3/74)

FIGURE 8-7
Percentage Change in Employment 1962-1972
Selected Metropolitan Areas in Ohio

Economic Sector	Akron	Canton	Cincinnati	Cleveland	Columbus	Dayton	Toledo	Youngstown--Warren
Total Nonagricultural Employment[a]	43.78	26.99	29.55	21.9	49.54	29.85	61.36	31.18
Contract Construction	29.51	37.84	35.67	-3.00	64.06	36.26	52.31	9.23
Manufacturing	14.92	7.87	6.78	1.15	20.22	12.12	40.49	24.61
Transportation	16.28	5.56	5.91	-2.33	16.19	21.57	25.56	22.41
Communications, Electric, Gas Services	28.57	45.45	16.82	32.67	42.65	26	66.67	14.81
Wholesale, Retail Trade	54.85	38.5	37.22	31.59	59.28	41.55	61.63	39.93
Finance, Insurance, Real Estate	61.54	29.73	23.64	29.57	63.00	52.17	42.37	36.36
Service	77.25	75	65.90	55.65	89.12	72.52	80.79	47.42
Government	138.46	47.37	62.61	49.03	51.62	27.72	141.72	37.82

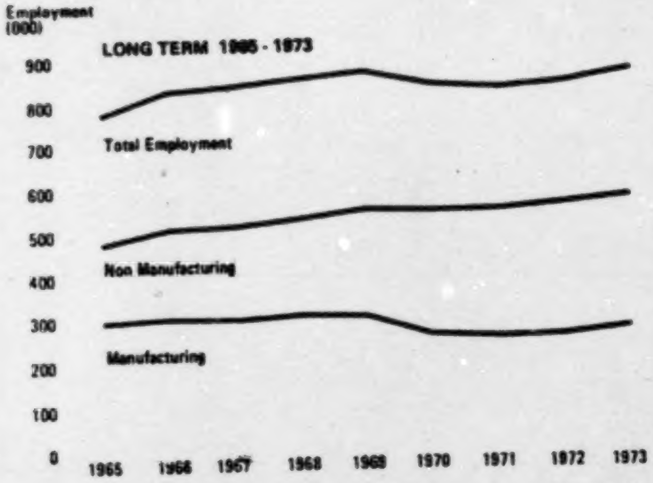
[a] Excludes self-employed, domestic, and armed forces.

Source: Division of Research and Statistics, Ohio Bureau of Employment Services.

FIGURE 8-8

Employment Growth - Service Industries 1965-1973

Cleveland SMSA



Source: Greater Cleveland Growth Association, Research and Planning Department.

FIGURE 8-9

EMPLOYMENT GROWTH AND DISTRIBUTION METROPOLITAN CLEVELAND 1960 - 1972

Sector	1960 Employment	%	1972 Employment	%	1960-72 Change Amount	%
GOODS PRODUCING	316,200	45	303,400	36	—12,800	—4
Manufacturing	282,800	40	272,300	32	—10,500	—4
Contract Construction	32,900	5	29,100	4	— 3,800	—12
Mining	500	—	1,500	—	1,000	300
SERVICE PRODUCING	384,100	55	536,000	64	151,900	40
Services	87,900	13	143,200	17	55,300	63
Retail Trade	97,100	14	129,400	15	32,300	33
Government	72,100	10	115,800	14	43,700	61
Wholesale Trade	48,300	7	56,400	7	8,100	17
Transportation, Utilities	46,600	6	49,200	6	2,600	6
Finance, Insurance, Real Estate	31,900	5	42,500	5	10,600	33
TOTAL	700,300	100	839,500	100	139,200	20

Note: The source for the above, Ohio Bureau of Employment Services, lists employment for 1960 for the then current definition of SMSA which included only Cuyahoga and Lake Counties. The 1972 figures reflect the addition of Geauga and Medina Counties. This definitional and data problem is not considered great enough to effect the basic conclusions that would be drawn from the above since employment in the latter two counties in 1960 was small.

EMPLOYMENT AND EARNINGS CLEVELAND METROPOLITAN AREA

Sector	Employment	% of Total	Earnings Weekly	Earnings Hourly
Manufacturing	272,300	32.4	$191.20	$4.52
Services	143,200	17.6	–	–
Retail Trade	129,400	15.4	106.16	3.15
Government	115,800	13.8	–	–
Wholesale Trade	56,400	6.7	166.40	4.16
Transportation-Utilities	49,200	5.9	–	–
Finance, Insurance, Real Estate	42,500	5.0	–	–
Contract Construction	29,100	3.4	275.80	7.22
Mining	1,500	.2	–	–
Total Employment	839,500	100.0		

Source: Nonagricultural Wage and Salary Employment in 1972, and Average Weekly and Hourly Earnings of Production Workers, Ohio Bureau of Employment Services; dashes indicate not available.

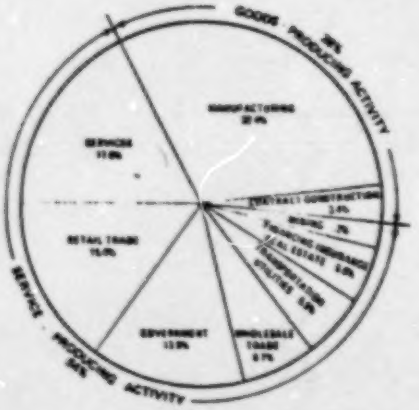


FIGURE 8-10

INDUSTRY OF EMPLOYED PERSONS, 1960-1970
Lake County and Ohio
(16 years old and over)

	Lake County			Percent Change		Percent of Total			
						Lake County		Ohio	
	1960	1970	Number Change	Lake County	Ohio	1960	1970	1960	1970
Primary Industries	30,144	41,576	11,432	37.9	8.2	57.4	53.4	48.2	43.2
Agric., Forestry, Fisheries	1,125	885	- 240	--21.3	-35.8	2.1	1.1	3.9	2.1
Mining	118	268	150	127.1	9.5	.2	.3	.6	.5
Construction	2,939	3,937	998	34.0	15.1	5.6	5.1	5.3	5.0
Manufacturing	25,962	36,486	10,524	40.5	11.7	49.5	46.9	38.4	35.6
Secondary Industries	22,283	36,190	13,907	62.4	31.8	42.6	46.6	51.8	56.8
Transportation, Utilities	3,016	3,865	849	28.1	9.3	5.8	5.0	6.8	6.2
Wholesale Trade	1,083	2,302	1,219	112.6	45.0	2.1	3.0	3.0	3.7
Retail Trade	6,808	11,291	4,483	65.8	25.0	13.0	14.5	15.0	15.6
Finance, Ins., Real Estate	2,176	2,577	401	18.4	38.2	4.2	3.3	3.5	4.0
Services	7,870	14,242	6,372	81.0	45.2	15.0	18.3	19.2	23.2
Public Administration	1,330	1,913	583	43.8	17.5	2.5	2.5	4.3	4.1
Total	52,427	77,766	25,339	48.3	20.5	100.0	100.0	100.0	100.0

Source: U.S. Census, 1960 and 1970.

FIGURE 8-11

Projections of Employment by Industry, 1960-2020

Industry	1960	1970	1980	1990	2000	2010	2020
				Number Employed			
Agriculture, Forestry, and Fishing	8,839	8,797	8,754	8,712	8,671	8,629	8,588
Mining	1,040	1,041	1,071	1,129	1,181	1,221	1,232
Construction	35,394	36,496	39,691	44,909	49,689	53,455	55,206
Manufacturing	322,512	330,432	341,066	353,939	366,518	378,271	388,182
Transportation, Communication, and Utilities	48,232	49,733	54,088	61,198	67,712	72,845	75,230
Trade, Wholesale and Retail	140,322	146,754	168,369	200,840	288,933	249,425	256,189
Finance, Insurance, and Real Estate	31,908	33,371	38,286	45,669	52,057	56,717	58,255
Services	113,751	118,965	136,487	162,810	185,583	202,194	207,678
Government and Education	66,038	68,987	77,381	89,674	100,435	108,515	111,729
Total	768,036	794,578	865,191	968,879	1,060,778	1,131,269	1,162,290
				Percentage Distribution			
Agriculture, Forestry, and Fishing	1.15	1.11	1.01	0.90	0.82	0.76	0.74
Mining	0.14	0.13	0.12	0.12	0.11	0.11	0.11
Construction	4.16	4.59	4.59	4.64	4.68	4.73	4.75
Manufacturing	41.99	41.59	39.42	36.53	34.55	33.44	33.40
Transportation, Communication, and Utilities	6.28	6.26	6.25	6.32	6.38	6.44	6.47
Trade, Wholesale and Retail	18.27	18.47	19.46	20.73	21.58	22.05	22.04
Finance, Insurance, and Real Estate	4.15	4.20	4.43	4.71	4.91	5.01	5.01
Services	14.81	14.97	15.78	16.80	17.49	17.87	17.87
Government and Education	8.60	8.68	8.94	9.26	9.47	9.59	9.61
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Note: Detail may not add to total because of rounding.
Percentages derived from unrounded absolutes.
Source: 1960: U. S. Census of Population; 1970 to 2020: Battelle projections.

Source: BATTELLE MEMORIAL INSTITUTE – COLUMBUS LABORATORIES

LAKE COUNTY INDUSTRY PROJECTIONS, 1970-2000

Battelle Memorial Institute has made projections of employment in Lake County. Their projections through the year 2000 are included in Figure 8-12. Considerable growth in employment is expected through the turn of the century. Even though total employment will double, many industries will triple quadruple by the year 2000.

Figure 8-12

Lake County Employment by Industry, 1960 to 2000

	1960	1970	1980	1990	2000
TOTAL EMPLOYMENT	52780	70475	92125	118257	146257
MINING	33	44	58	75	94
CONSTRUCTION	2432	3237	4226	5481	6851
FOOD AND KINDRED PRODUCTS	1093	1447	1885	2413	2973
TOBACCO MANUFACTURES	6	7	9	9	10
TEXTILE MILL PRODUCTS	338	445	545	637	735
APPAREL	600	790	968	1132	1304
LUMBER AND WOOD PRODUCTS	83	106	127	145	163
FURNITURE AND FIXTURES	261	333	396	451	506
PAPER AND ALLIED PRODUCTS	473	654	842	1034	1253
PRINTING AND PUBLISHING	1384	1848	2391	3038	3736
CHEMICAL AND ALLIED PRODUCTS	1377	1887	2405	2926	3509
PETROLEUM REFINING	317	429	540	652	775
RUBBER AND PLASTIC PRODUCTS	478	650	821	990	1177
LEATHER PRODUCTS	19	24	29	34	39
STONE, CLAY AND GLASS	343	468	610	772	952
PRIMARY METALS	2957	3802	4547	5193	5843
FABRICATED METALS	2366	3111	3819	4489	5194
NONELECTRICAL MACHINERY	3146	4246	5330	6389	7547
ELECTRICAL MACHINERY	2049	2727	3376	3991	4649
TRANSPORTATION EQUIPMENT	4266	5527	6660	7663	8690
PROFESSIONAL EQUIPMENT	306	403	495	579	668
MISCELLANEOUS PRODUCTS	303	404	523	663	812
RAILROAD TRANSPORTATION	387	515	672	872	1090
TRANS., COMM., AND UTILITIES	2928	3896	5087	6597	8246
WHOLESALE AND RETAIL TRADE	9643	13016	17928	24514	31565
FINANCE, INSURANCE, REAL EST.	2193	2960	4077	5574	7178
SERVICE	7817	10552	14533	19872	25588
GOVERNMENT AND EDUCATION	3440	4643	6395	8744	11260
EXPORT MINING	38	48	56	63	69
EXPORT GOVERNMENT	1098	1476	1844	2201	2588
AGRICULTURE, FORESTRY, FISH.	607	780	932	1063	1195

Source: Battelle Memorial Institute, 1970.

LAKE COUNTY OCCUPATIONAL PROJECTIONS - OHIO DEPARTMENT OF LABOR

An impressive new service provided by the Ohio Department of Labor is a five-year projection of job needs by school planning districts and classified by vocational taxonomy code. In spring, 1974, the first of these reports became available. Below is the printout of the projections based on the Lake County Joint Vocational District employment needs. Presumably, these are available for all school systems in Lake County.

FIGURE 8-13

STATE OF OHIO
DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
RESEARCH, SURVEY, EVALUATION AND EXEMPLARY PROGRAMS

DATA CENTER

LABOR DEMAND RELATED TO VOCATIONAL EDUCATION PROGRAMS
FEBRUARY 25, 1974

TAXONOMY CODE	TAXONOMY NAME	CURRENT EMPLOYMENT	1-YEAR PROJECTED EMPLOYMENT NEED	5-YEAR ACCUMULATED EMPLOYMENT NEED	RATE OF PROJECTED GROWTH OVER 5 YEARS
01,0000	AGRICULTURE	2,613	222	984	RAPID
01,0100	AG PRODUCTION	605	18	50	SLOW
01,0101	ANIMAL SCIENCE	21	2	22	VERY RAPID
01,0104	FARM BUS MNGMT				
01,0200	AG SUPPLIES	332	34	156	RAPID
01,0300	AG MECH	45	5	22	VERY RAPID
01,0400	AG PRODUCTS	324	36	159	RAPID
01,0500	HORTICULTURE	590	64	289	RAPID
01,0600	AG RES	500	51	217	RAPID
01,0699	OTHER AG RES				
01,0700	FORESTRY	196	12	69	RAPID
01,9900	OTHER AG				
04,0000	DISTRIBUTIVE	4,800	442	1,524	MODERATE
04,0100	ADVT SVCS	38	2	7	SLOW
04,0101	RADIO BROADCAST	9	0	2	SLOW
04,0102	TELEVISION				
04,0200	APPAREL & ACCES	140	12	49	RAPID
04,0300	AUTOMOTIVE	80	7	27	MODERATE
04,0400	FIN & CREDIT	24	2	8	MODERATE
04,0500	FLORISTRY	6	1	2	RAPID
04,0600	FOOD DISTR	404	49	100	MODERATE
04,0700	FOOD SVCS	566	54	217	RAPID
04,0800	GENERAL MDSE	846	80	321	RAPID
04,0801	MRKG MNGMT	3	0	1	RAPID
04,0802	PERSONNEL MNGMT	0	0	0	RAPID
04,0900	HDWE BLDG MTRL	32	3	11	RAPID
04,1000	HOME FURNISHING	17	1	6	RAPID
04,1100	HOTEL & LODGING	13	1	3	MODERATE
04,1200	INDUSTRIAL MRKG	762	75	277	RAPID
04,1300	INSURANCE	159	15	57	RAPID
04,1400	INTL TRADE				
04,1500	PERSONAL SVCS				
04,1501	VOC MUSIC				
04,1502	PERFORMING ARTS				
04,1600	PETROLEUM	337	25	9	SLOW

TAXONOMY CODE	TAXONOMY NAME	CURRENT EMPLOYMENT	1-YEAR PROJECTED EMPLOYMENT NEED	5-YEAR ACCUMULATED EMPLOYMENT NEED	RATE OF PROJECTED GROWTH OVER 5 YEARS
04,1700	REAL ESTATE	26	2	10	RAPID
04,1800	REC & TOURISM	69	4	17	MODERATE
04,1900	TRANSPORTATION	1,269	107	400	MODERATE
04,3100	OTHER WHOLESALE				
04,9998	OCC WORK ADJ				
07,0000	HEALTH OCC	1,079	115	485	RAPID
07,0101	DENTAL ASST	18	2	7	RAPID
07,0102	DENTAL HYGIENE	8	1	4	RAPID
07,0103	DENTAL LAB TECH	7	0	1	SLOW
07,0200	MED LAB TECH	22	2	10	RAPID
07,0201	CYTOLOGY				
07,0202	HISTOLOGY				
07,0203	MED LAB ASST	51	3	15	MODERATE
07,0204	HEMATOLOGY				
07,0301	NURSE ASSOC DEG	297	39	151	VERY RAPID
07,0302	PRACT VOC NURSE	156	21	85	VERY RAPID
07,0303	NURSES AIDE	406	42	187	RAPID
07,0304	PYSCH AIDE				
07,0305	SURGICAL TECH				
07,0306	OBSTET TECH				
07,0307	HOME HEA AIDE				
07,0308	SCH HEA AIDE				
07,0401	OCC THERAPY	13	2	6	RAPID
07,0402	PHYS THERAPY	14	1	5	RAPID
07,0403	PROSTHETICS				
07,0404	ORTHOTICS				
07,0501	RADIOLOGIC TECH	26	2	8	MODERATE
07,0502	RAD THERAPY				
07,0503	NUCL MED TECH				
07,0603	OPTOM ASST				
07,0701	ENV HEA ASST				
07,0702	RAD HEA TECH				
07,0703	SANITARIAN ASST				
07,0801	MENTAL HEA TECH				
07,0802	MENTAL RETARD				

TAXONOMY CODE	TAXONOMY NAME	CURRENT EMPLOYMENT	1-YEAR PROJECTED EMPLOYMENT NEED	5-YEAR ACCUMULATED EMPLOYMENT NEED	RATE OF PROJECTED GROWTH OVER 5 YEARS
07,0901	EEG TECH	2	0	1	RAPID
07,0902	ELCT-CARD TECH	2	0	1	RAPID
07,0903	INHALTN THERAPY	8	1	4	VERY RAPID
07,0904	MED ASST				
07,0905	CENTRAL SUPPLY				
07,0906	COM HEA AIDE				
07,0907	MED EMGY TECH				
07,0909	MORTUARY SCI				
07,0910	ORTHOPEDIC ASST				
07,0911	MED REC ASST				
07,0998	DIVERSIFIED HEA				
09,0000	HOME ECONOMICS	1,399	133	557	RAPID
09,0101	COMP HOMEMAKING				
09,0102	CHILD DEVELOP				
09,0103	CLOTHING & TEXT				
09,0104	CONSUMER EDUC				
09,0105	FAMILY HEA				
09,0106	FAMILY RELATION				
09,0107	FOODS & NUTRITN				
09,0108	HOME MNGMT				
09,0109	HOUSNG & HM FRN				
09,0201	CHILD CARE	12	1	5	RAPID
09,0202	FABRIC SVC	412	31	121	MODERATE
09,0203	FOOD SVC	892	93	394	RAPID
09,0204	UPHOLSTERY WRKR				
09,0205	COMM & HOME SVC	39	5	22	VERY RAPID
09,0213	CATERING SVC				
09,0223	BAKER	44	4	15	MODERATE
14,0000	BUS & OFF EDUC	5,367	426	1,786	MODERATE
14,0100	ACCOUNT & COMP	900	61	285	MODERATE
14,0200	BUS DP SYS	255	21	89	RAPID
14,0300	GENERAL OFF				
14,0301	DUPLICATING OPR	14	1	5	MODERATE
14,0302	CLERICAL SVCS	44	3	9	MODERATE

TAXONOMY CODE	TAXONOMY NAME	CURRENT EMPLOYMENT	1-YEAR PROJECTED EMPLOYMENT NEED	5-YEAR ACCUMULATED EMPLOYMENT NEED	RATE OF PROJECTED GROWTH OVER 5 YEARS
14,0303	OFF CLERK	1,746	150	635	RAPID
14,0399	OFF MACHS	5	0	2	RAPID
14,0400	INFO COMM OCC	522	33	129	MODERATE
14,0402	CORRESP CLERK				
14,0406	MED REC CLERK				
14,0500	MTRL SUPPORT	750	59	242	MODERATE
14,0600	PERSONNEL TRNG	61	3	10	SLOW
14,0700	STENO & SEC OCC	638	59	239	RAPID
14,0800	SUPVR & ADM	25	2	8	MODERATE
14,0900	TYPING & REL	393	33	129	MODERATE
14,9900	MISC OFF	15	1	4	MODERATE
16,0000	TECHNICAL EDUC	533	37	150	MODERATE
16,0101	AERON TECH				
16,0103	ARCHIT TECH				
16,0104	AUTOMOTIVE TECH				
16,0105	CHEM TECH	279	20	82	MODERATE
16,0106	CIVIL TECH	16	1	3	MODERATE
16,0107	ELECTRICAL TECH	83	5	22	MODERATE
16,0108	ELECTRONIC TECH	119	8	34	MODERATE
16,0109	EL-MECH TECH				
16,0110	ENV CONTR TECH	5	0	2	RAPID
16,0111	INDUSTRIAL TECH	23	1	3	SLOW
16,0112	INSTRUM TECH				
16,0113	MECH TECH				
16,0114	METAL TECH				
16,0115	NUCL TECH				
16,0116	PETROLEUM TECH	3	1	5	VERY RAPID
16,0118	WELDING TECH				
16,0119	MIN ENG TECH				
16,0120	CERAM ENG TECH				
16,0199	OTHER ENG TECH				
16,0601	COMM PILOT TRNG	5	0	0	SLOW
16,0602	FIRE & SAFETY				
16,0604	OCEANOG TECH				
16,0605	POLICE SCI TECH				

TAXONOMY CODE	TAXONOMY NAME	CURRENT EMPLOYMENT	1-YEAR PROJECTED EMPLOYMENT NEED	5-YEAR ACCUMULATED EMPLOYMENT NEED	RATE OF PROJECTED GROWTH OVER 5 YEARS
16,0606	GRAPH ART TECH				
16,0607	MECH DESGN TECH				
16,0608	PLASTICS TECH				
17,0000	TRADE & INDUSTR	7,011	589	2,322	MODERATE
17,0100	AIR COND & HEAT	25	2	8	MODERATE
17,0101	COOLING				
17,0102	HEATING				
17,0103	VENTILATING				
17,0200	APPL REPAIR	48	4	18	RAPID
17,0301	BODY & FENDER	112	13	64	VERY RAPID
17,0302	MECHANICS	248	30	117	RAPID
17,0303	SPECIALIZATION				
17,0400	AVIATION OCC				
17,0401	AIRCRAFT MAINT	29	0	1	SLOW
17,0402	AIRCRAFT OPER				
17,0403	GROUND OPER	8	1	4	VERY RAPID
17,0600	BUS MACH MAINT	17	1	7	RAPID
17,0700	COMM ART OCC	27	2	10	RAPID
17,0800	COMM FISH OCC				
17,0801	SEAMANSHIP	26	0	1	SLOW
17,0802	SHIP & BOAT OP	8	0	0	SLOW
17,0900	COMM PHOTO OCC	27	1	5	SLOW
17,1001	CARPENTRY	205	29	11	SLOW
17,1002	CONSTR ELECT	158	14	61	RAPID
17,1003	HEAVY EQUIPMENT	219	13	53	MODERATE
17,1004	MASONRY	62	7	27	RAPID
17,1005	PAINT & DECOR	75	7	33	RAPID
17,1006	PLAST & DRYWALL	13	2	10	VERY RAPID
17,1007	PLMBG & PIPEFIT	123	13	75	VERY RAPID
17,1009	GLAZING	18	1	5	MODERATE
17,1010	ROOFING	13	2	6	RAPID
17,1011	BLDG MAINT	166	11	42	MODERATE
17,1012	INDUST MAINT	414	26	124	MODERATE
17,1013	RSL FLOOR LAYER				
17,1014	ASBESTOS WRKR				

TAXONOMY CODE	TAXONOMY NAME	CURRENT EMPLOYMENT	1-YEAR PROJECTED EMPLOYMENT NEED	5-YEAR ACCUMULATED EMPLOYMENT NEED	RATE OF PROJECTED GROWTH OVER 5 YEARS
17,1015	ELEVATOR MAINT				
17,1100	CUSTODIAL SVCS	720	62	249	RAPID
17,1200	DIESEL MECH	16	2	9	VERY RAPID
17,1201	MINE MAINT MECH				
17,1300	DRAFTING OCC	158	19	72	RAPID
17,1402	LINEMEN				
17,1403	MOTOR REPAIRMAN	13	1	6	RAPID
17,1501	COMM ELECT	61	5	18	MODERATE
17,1502	INDUST ELECT	78	7	36	RAPID
17,1700	MNGMT DEVEL	419	19	72	SLOW
17,1900	GRAPHIC ART OCC	138	7	15	SLOW
17,2000	CHEM LAB				
17,2001	INS OP MT REACT	75	3	11	SLOW
17,2002	RADIOGRAPHY				
17,2003	IND RAD-ISOTOPE				
17,2100	INSTR MAINT REP	81	3	11	SLOW
17,2301	FOUNDRY	91	5	27	MODERATE
17,2302	MACH SHOP	636	58	213	MODERATE
17,2303	MACH TOOL OPER	267	23	100	RAPID
17,2305	SHEET METAL	112	8	40	RAPID
17,2306	WELDING & CUTNG	264	24	90	MODERATE
17,2307	TOOL & DIE	204	21	89	RAPID
17,2310	IRON WORKER				
17,2400	METALLURGY OCC	21	3	13	VERY RAPID
17,2601	BARBERING				
17,2602	COSMETOLOGY	70	6	27	RAPID
17,2700	PLASTICS OCC	118	12	48	RAPID
17,2801	FIREMAN TRNG	94	3	19	MODERATE
17,2802	LAW ENF TRNG	270	22	95	RAPID
17,2804	SCH BUS DRIVER				
17,2903	MEAT CUTTER	132	10	34	MODERATE
17,3000	REFRIGERATION				
17,3100	SMALL ENG REPR	5	1	3	VERY RAPID
17,3201	EL PWR & GEN PL	48	2	10	MODERATE
17,3202	PUMPING PL	25	2	9	MODERATE
17,3203	HYDRAULIC OCC				

TAXONOMY CODE	TAXONOMY NAME	CURRENT EMPLOYMENT	1-YEAR PROJECTED EMPLOYMENT NEED	5-YEAR ACCUMULATED EMPLOYMENT NEED	RATE OF PROJECTED GROWTH OVER 5 YEARS
17,3400	LEATHER WORKING				
17,3500	UPHOLSTERING	13	1	4	MODERATE
17,3601	MILLWRK & CABNT	21	1	6	MODERATE
17,3602	WOOD PATTERNMK				
17,9901	OTHER T & I OCC	816	81	313	RAPID
17,9998	OCC LAB				
17,9999	OCC WORK EXPER				
	VEPD TOTAL	22,752	1,964	7,808	MODERATE

CHAPTER IX

RECOMMENDATIONS OF THE CITIZENS ADVISORY COMMITTEE

RECOMMENDATIONS OF THE CITIZENS ADVISORY COMMITTEE

The Citizens Advisory Committee met together on September 16, 1975, at Lakeland Community College to decide on the specific recommendations they would make as a result of the Lake County Career Opportunities Study II. Those in attendance were John Antalovich, Donald Cleary, Robert Dover, Edgar C. Joslin, Jr., Joseph Lesak, Peter Oberson, Lynn Russell, John Sackl, Robert Setzer, Dorothy Westerhoff, Betty Wollpert and Tim Wright. Several members who were unable to attend personally but indicated approval of the suggested recommendations which with one addition were subsequently adopted. These members were: L.M. Berichon, Andrew Buynacek, Louis Cicek, Pat Corbett, William Heylock, and William Kendra. Guests included William Grose, Dr. Wayne Rodehorst, and Leonard Slominski. The specific recommendations approved at this meeting were as follows:

1. We strongly recommend that significant programs in career development and information be implemented in the Lake County public schools at the elementary and secondary level. We commend the new Career Education programs and their goals, but it appears from the data gathered herein that student career aspirations suggest further need to develop this activity. We further recommend that these career education and development activities be integrated into programs and courses and that teachers be informed and/or persuaded of their important contribution to student career development.

2. We recommend an up-grading in the career counseling activities in the public schools. The emphasis of this program should be directed to the "middle" level of the student body, traditionally neglected in the counseling effort. We do not suggest that counselors are purposefully neglecting this activity, but rather that resources be allocated to change, add, and redirect current counseling effort.

   We recommend that special attention be given to career information and planning for the general program student, women, and minority groups. It will be especially important for the student not planning to go to college. The inference from the data collected is that students in college preparatory and vocational programs are the most satisfied students attending Lake County public schools. We believe a special effort should be made to reach students needing this career guidance who, for whatever reason, presently are not receiving these services.

3. We recommend that the information be disseminated in a systematic way beginning with a meeting of the various superintendents of schools. In particular, curriculum leaders, counselors, vocational teachers, social science teachers (elementary and secondary) should be appraised of the results of this study and its recommendations.

4. We recommend the establishment of a center for career planning and information at Lakeland Community College. This new department would serve three segments of the LCC student body: those changing career directions, those students who are returning to the labor force after raising families, and the student fresh from high school or the armed services who has little understanding of careers and career potential. The major activities of this department would be testing, job placement, and maintainance of a library of career-related data to be provided to Lakeland faculty and interested community groups.

   This center for career planning and information would also serve as the catalyst to monitor progress toward the changes proposed in these recommendations.

5. In view of the lack of uniformity of the material in adult education or continuing education courses in the Lake County public schools, we recommend that Lakeland Community College act as a "clearinghouse" for information regarding these courses. Perhaps Lakeland could develop a brochure detailing continuing education course information from throughout the county.

6. We recommend that another comprehensive study of this type be taken in 1980 to further ascertain career aspirations, employment opportunities, career counseling, course and program availability, and most importantly evaluation of current programs in secondary institutions and Lakeland Community College. The follow-up studies evaluated should attempt to determine of any continuous program measuring students at various points of their careers has been undertaken.

APPENDIX AND BIBLIOGRAPHY

1. Superintendents' Questionnaire - Enrollments
2. Labor Market Needs Questionnaire
3. Description of Job Categories
4. Superintendents' Questionnaire - Career Programs
5. Senior Questionnaire - Lake County Students
6. 9-10-11 Grade Questionnaire - Lake County Students
7. Exploring Career Interest Questionnaire
8. Counselors' Questionnaire
9. Bibliography

LAKE COUNTY CAREER OPPORTUNITIES

STUDY--1974

SUPERINTENDENTS' QUESTIONNAIRE

1. What are your total school system enrollments by grades?

Grade Level	Number of Students
7	________
8	________
9	________
10	________
11	________
12	________
Total school enrollments 1973-1974	________

2. Have you projected these enrollments through the 1978-79 school year?

Yes ________ No ________

If yes, please indicate those enrollments by grade.

Grade Level	Number of Students
7	________
8	________
9	________
10	________
11	________
12	________
Total school enrollments 1978-1979 (Projections)	________

TW:db

COMPANY________________________________

LABOR MARKET NEEDS QUESTIONNAIRE

Directions: Use a separate questionnaire for each job category that applies.

1. JOB CATEGORY (Check One)

_____ A. Officials and Managers
_____ B. Professional
_____ C. Technicians
_____ D. Sales
_____ E. Office and Clerical
_____ F. Craftsman (Skilled)
_____ G. Operatives (Semiskilled)
_____ H. Laborers (Unskilled)
_____ I. Service workers

2. What percentage of your employment needs in the next four years will be accounted for by this job category?

Check one - 76 - 100%_____ 51 - 75%_____ 36 - 50%_____ 21 - 35%_____
11 - 20%_____ Below 10%_____

3. Is this a job category that is increasing rapidly with your firm?
Yes_____ No_____. If yes, please explain.

4. Based on your past experience, are the employees hired into this job category fully qualified? Yes_____ (go to question #7) , No_____ If no please explain:

5. Could these new employees be better prepared to assume their job responsibilities in the area of:

A. Job skill - No_____ Yes_____ (Please explain)

B. Job knowledge - No_____ Yes_____ (Please explain)

C. Job attitudes - No_____ Yes_____ (Please explain)

6. Could this needed training be shifted to the schools? Yes_____ No_____
Please explain:

7. Is this a job category which does not require any specific vocational training? Yes_____ No_____

8. Do you have tuition refund plans for people in this job category who complete:

A. College Courses Yes_____ No_____

B. High School Courses (credit) Yes_____ No_____

C. High School Courses (non-credit) Yes_____ No_____

DESCRIPTION OF JOB CATEGORIES

Officials and managers.-- Occupations requiring administrative personnel who set broad policies, exercise over-all responsibility for execution of these policies, and direct individual departments or special phases of a firm's operations. Includes: officials, executives, middle management, plant managers, department managers, and superintendents, salaried foremen who are members of management purchasing agents and buyers, and kindred workers.

Professional.-- Occupations requiring either college graduation or experience of such kind and amount as to provide a comparable background. Includes: accountants and auditors, airplane pilots and navigators, architects, artists, chemists, designers, dietitians, editors, engineers, lawyers, librarians, mathematicians, natural scientists, registered professional nurses, personnel and labor relations workers, physical scientists, physicians, social scientists, teachers, and kindred workers.

Technicians.-- Occupations requiring a combination of basic scientific knowledge and manual skill which can be obtained through about 2 years of post high school education, such as is offered in many technical institutes and junior colleges, or through equivalent on-the-job training. Includes: computer programmers and operators, draftsmen, engineering aides, junior engineers, mathematical aides, licensed, practical or vocational nurses, photographers, radio operators, scientific assistants, surveyors, technical illustrators, technicians (medical, dental, electronic, physical sciences), and kindred workers.

Sales.-- Occupations engaging wholly or primarily in direct selling. Includes: advertising agents and salesmen, insurance agents and brokers, real estate agents and brokers, stock and bond salesmen, demonstrators, salesmen and sales clerks, grocery clerks and cashier-checkers, and kindred workers.

Office and clerical.-- Includes all clerical-type work regardless of level of difficulty, where the activities are predominantly nonmanual though some manual work not directly involved with altering or transporting the products is included. Includes: bookkeepers, cashiers, collectors (bills and accounts), messengers and office boys, office machine operators, shipping and receiving clerks, stenographers, typists and secretaries, telegraph and telephone operators, and kindred workers.

Craftsmen (skilled).-- Manual workers of relatively high skill level having a thorough and comprehensive knowledge of the processes involved in their work. Exercise considerable independent judgment and usually receive an extensive period of training. Includes: the building trades, hourly paid foremen and leadmen who are not members of management, mechanics and repairmen, skilled machining occupations, compositors and typesetters, electricians, engravers, job setters (metal), motion picture projectionists, pattern and model makers, stationary engineers, tailors and tailoresses, and kindred workers.

Operatives (semiskilled).-- Workers who operate machine or processing equipment or perform other factory-type duties of intermediate skill level which can be mastered in a few weeks and require only limited training. Includes: apprentices (auto mechanics) plumbers, bricklayers, carpenters, electricians, machinists, mechanics, plumbers, building trades, metalworking trades, printing trades, etc.), operatives, attendants (auto service and parking), blasters, chauffeurs, deliverymen and routemen, dressmakers and seamstresses (except factory), dryers, furnacemen, heater (metal), laundry and dry cleaning operatives, milliners, mine operatives and laborers, motormen, oilers and greasers (except auto), painters (except construction and maintenance), photographic process workers, stationary firemen, truck and tractor drivers, weavers (textile), welders, and flamecutters, and kindred workers.

Laborers (unskilled).-- Workers in manual occupations which generally require no special training . Perform elementary duties that may be learned in a few days and require the application of little or no independent judgment. Includes: garage laborers, car washers and greasers, gardeners (except farm) and groundskeepers, longshoremen and stevedores, lumbermen, raftsmen and wood choppers, laborers performing lifting, digging, mixing, loading and pulling operations, and kindred workers.

Service workers.-- Workers in both protective and nonprotective service occupations. Includes: attendants (hospital and other institution, professional and personal service, including nurses aides, and orderlies), barbers, charwomen and cleaners, cooks (except household), counter and fountain workers, elevator operators, firemen and fire protection, guards, watchmen and doorkeepers, stewards, janitors, policemen and detectives, porters, waiters and waitresses, and kindred workers.

LAKE COUNTY CAREER OPPORTUNITIES STUDY - 1974

DIRECTIONS: Please read the following carefully before filling in the attached questionnaire.

The purpose of this questionnaire is to determine what is now being offered in Lake County Junior and Senior High Schools to prepare youngsters for possible careers upon graduation. The questionnaire is divided into particular areas of study. These include Vocational Education; Industrial Arts; Home Economics; Business Education; Performing Arts; Specialized Career Related Courses; Adult Education Avocational; and Adult Education-Skill Development.

Please read the following definitions for consistency in the meanings of Titles:

1. Adult Education - Avocational

   Provides non-credit learning experiences in leisure time interests.

2. Adult Education - Vocational

   Skill development for specific job training and/or upgrading of skills; can include apprenticeship programs. The courses are non-credit.

3. Business Education

   A planned program of instruction predominantly manipulative in nature which provides learning experiences in typing, commercial law, shorthand, business machines, etc. NOT FUNDED THROUGH VOCATIONAL EDUCATION.

4. Career Education

   A comprehensive educational program designed to provide students with the necessary information and developmental experiences to prepare them for living and working in society. It combines the efforts of home, school, and community and reaches from pre-school to adulthood.

5. Career Exploration

A course designed specifically for possible career(s) exploration.

6. Home Economics

Home Economics Education is a program of instruction planned to assist individuals to understand and solve problems in home and family living. Subject matter areas include: child development; family relationships; food and nutrition; clothing and textiles; family economics and home management; housing, home furnishings, and equipment; and family health.

7. Industrial Arts

Industrial Arts Education is one of the practical arts offering instructional shopwork of a non-vocational type which provides general educational experiences centered around the industrial and technical aspects of life today and offers orientation in the areas of appreciation, production, consumption, and reaction through actual experiences with materials and goods. Also serves as exploratory experiences helpful in the choice of a vocation. Since this is considered general experience and not "vocational education," it is not eligible for vocational education funds.

8. Performing Arts

A program of instruction planned to provide opportunities to discover, explore, develop and evaluate talent and skills in art, music and dramatics. Subject areas should include art (watercolor, oils, textile design, etc.), music (band, orchestra, vocal and theory), and dramatics. Dramatics would include auxilliary skills such as lighting, costume design, set design and photography.

9. Programs

A program is defined for our purposes as a series of individual courses leading to an educational outcome

10. Vocational Education (For purposes of this survey, do not include Special Needs programs)

—that part of an educational experience which has a primary purpose of equipping persons for useful employment in semi-skilled, skilled, technical and paraprofessional occupations. Programs are designed to serve the needs of two distinct groups: first, youth and adults who are preparing to enter occupations in the areas noted above, and second, adults who have entered upon employment and desire upgrading or retraining.

Vocational education provides not only the technical knowledge and work skills necessary for employment, but also develops abilities, attitudes, work habits and appreciations which contribute to a satisfying and productive life. Its contribution is the blending of theoretical knowledge with the practical experiences and requirements of entry jobs, recognizing the nature of the world of work.

In a general sense, vocational programs may be classified into two categories:

a) Vocational education programs that are reimbursable from state and/or federal vocational education funds.

b) Vocational education programs that are not reimbursable from state and/or federal vocational education funds.

Person completing form ____________________
Position ____________________
School ____________________

1. What grades are included in your building? ____________________

2. Number of students in your building? ____________________

3. What is the percentage and number of students in the following areas: (For high school only)

	Percentage(%)	Number
College Prep.		
General Education		
Vocational		
Business Ed. (Not vocationally funded)		
Industrial Arts (Not vocationally funded)		

4. Are all students required to participate in either an Industrial Arts or Home Economics course? Yes ________ No ________

If YES, at what grade level(s)? ____________________

4a. Are boys allowed to take Home Economics? Yes ________ No ________

If YES, what grade levels? ____________________

4b. Are girls allowed to take Industrial Arts? Yes ________ No ________

If YES, what grade levels? ____________________

5. Do you have a formally structured career education (career exploration) program? Yes ________ No ________

If YES, at what grade level does the program begin ____________________

6. Approximately what percentage of your 1973 graduates went on to college? (for high schools only) ____________________

7. Your Industrial Arts Programs are considered to be:

Career exploration ____________________
Skill training ____________________
Other ____________________

8. Your Home Economics courses are considered to be:

Career exploration ____

Skill training ____

Other ____

9. Your Business Courses are considered to be:

Career exploration ____

Skill training ____

Other ____

10. Your Performing Arts courses are considered to be:

Career exploration ____

Skill training ____

Other ____

GENERAL QUESTIONS REGARDING YOUR CURRENT CURRICULUM OFFERINGS:

1. What kinds of innovations in career oriented courses or programs has your school tried (such as mini-courses) in order to broaden the occupational information or experience base of your student body? How successful was it? When did you offer the program(s)? What period of time was involved?

2. How many students take advantage of early dismissal in your school? (Do not include vocational or special needs students) ________________________

3. What kinds of educational experiences are youngsters asking for that you are not offering?

4. Do you have a systematic method to insure that technical/vocational/business teachers keep current in their respective fields?

Yes_______ No______. If YES, briefly explain the system.

5. Do you have a systematic way to encourage non-technical/vocational/business teachers (e.g. general education teachers, English, History, etc.) to get career experiences other than in their teaching discipline?

Yes_______ No_______. If YES, briefly explain the system.

(High School Only)

6. Do you have a career placement office?

Yes_______ No_______. If YES, what percentage of the student body is served by this office.

_____5% or less _____10-20%

_____6-10% _____above 20%

(High School only)

7. How many vocational counselors do you have?

_____none _____one _____two _____three or more

(High School only)

8. Do you require follow-up studies of graduates of the following programs?

Required Follow-up Studies

All Vocational Programs Yes _____ No _____

Some Vocational Programs Yes _____ No _____

Business Education Yes _____ No _____

Home Economics Yes _____ No _____

Industrial Arts Yes _____ No _____

Performing Arts Yes _____ No _____

Comments:

LAKE COUNTY CAREER OPPORTUNITIES STUDY - 1974

Directions: Please refer to page one for definition of terms before filling out this Questionnaire.

	GRADE LEVEL OFFERED						
	7	8	9	10	11	12	Adult Ed.
VOCATIONAL EDUCATION PROGRAMS	(Approximate No. of Students Enrolled)						
Child Care							
Chef Training							
Machine Shop							
Auto Mechanics							
Graphic Arts							
Auto Body							
Carpentry							
Drafting							
Occupational Work Experience							
Diversified Cooperative Training							
Elect. & Electron							
Data Processing							
Intensive Office Education							
Copy Technician							
Cooperative Office Education							
Distributive Education							
Horticulture							
Clerk-Typist							
Stenography							
Other							

LAKE COUNTY CAREER OPPORTUNITIES STUDY - 1974

Directions: Please refer to page one for definition of terms before filling out this Questionnaire.

	GRADE LEVEL OFFERED						
HOME ECONOMICS COURSE (Non-Vocational)	7	8	9	10	11	12	Adult Ed.
	(Approximate No. of Students Enrolled)						
Clothing							
Foods							
Child Care							
Home Management							
Interior Decorating							
Consumer Education							
General Home Econom.							
Other							

SPECIALIZED CAREER RELATED COURSES

______________							
______________							
______________							

LAKE COUNTY CAREER OPPORTUNITIES STUDY - 1974

Directions: Please refer to page one for definition of terms before filling out this Questionnaire.

GRADE LEVEL OFFERED

BUSINESS EDUCATION COURSE (Non-Vocational)	7	8	9	10	11	12	Adult Ed.
	(Approximate No. of Students Enrolled)						
Retailing							
Salesmanship							
Accounting/Bkkg.							
Business English							
Business Machines							
Business Math							
General Business							
Data Processing							
Note Hand							
Office Practice							
Shorthand							
Typing							
Other							

LAKE COUNTY CAREER OPPORTUNITIES STUDY - 1974

Directions: Please refer to page one for definition of terms before filling out this Questionnaire.

GRADE LEVEL OFFERED

(Approximate No. of Students Enrolled)

INDUSTRIAL ARTS COURSES (Non-Vocational)	7	8	9	10	11	12	Adult Ed.
Drafting							
Auto Mechanics							
Elec. & Electron.							
Wood Working							
General Shop							
General Metals							
Graphic Arts							
Machine Shop							
Power Mechanics							
Shop Math							
Welding							
Other							

LAKE COUNTY CAREER OPPORTUNITIES STUDY - 1974

Directions: Please refer to page one for definition of terms before filling out this Questionnaire.

GRADE LEVEL OFFERED

(Approximate No. of Students Enrolled)

PERFORMING ARTS COURSES	7	8	9	10	11	12	Adult
Drama							
Theatre							
Vocal Music							
Orchestra							
Band							
Speech							
Debate							
Dance							
Art							
Other							

LAKE COUNTY CAREER OPPORTUNITIES STUDY - 1974

Please indicate potential new course offerings which you intend to implement within the next three years: (1974-75 to 1876-77)

Program(s)	Grade Level(s)

Individual Course(s)	

LAKE COUNTY CAREER OPPORTUNITIES STUDY - 1974
SENIOR QUESTIONNAIRE

A study is underway aimed at improving educational opportunities in this area. You can help, too, by answering each of the questions which apply to you. Please answer all questions as completely and accurately as possible. DO NOT SIGN YOUR NAME.

1. School (please print) ________________________________

2. Male (1) ________ Female (2) ________

3. Which of the following best describes your high school program of study? (Check one)

____ (1) Vocational
____ (2) College Preparatory
____ (3) Industrial Arts
____ (4) Commercial or Business (other than C.O.E., I.B.O.E.)
____ (5) Home Economics
____ (6) General
____ (7) Other (write in) ________________________

4. What do you plan to do on a full-time basis the first year after high school graduation? (check one)

____ (1) Apprenticeship program to learn a trade
____ (2) On-the-job training with a company
____ (3) Enter military service
____ (4) Become a full-time housewife
____ (5) Attend adult education classes
____ (6) Work full-time
____ (7) Attend a four-year college
____ (8) Attend a two-year community or junior college
____ (9) Attend a technical or business school
____ (10) Don't know
____ (11) Other (write in) ________________________________
____

5. Why did you follow the program you have indicated?

____ (1) This program seemed to fit my future goals.
____ (2) My parents decided for me.
____ (3) A counselor advised me to take this program.
____ (4) A teacher advised me to take this program.
____ (5) My friends were taking this program.
____ (6) This program seemed easy.
____ (7) A part-time job.
____ (8) Other (write in) ________________________________
____

DIRECTIONS FOR QUESTIONS 6-10

How would you rate the following high school services, experiences, or facilities? (Opposite each item check either "excellent," "satisfactory," or "poor.")

		excellent	**satisfactory**	**poor**
6.	Counseling or guidance on post high school education	___(1)	___(2)	___(3)
7.	Counseling or guidance on career choice	___(1)	___(2)	___(3)
8.	Library materials & information on careers	___(1)	___(2)	___(3)
9.	Courses offered	___(1)	___(2)	___(3)
10.	Preparation for what I plan to do after graduation	___(1)	___(2)	___(3)

* * * * * * * * * * * * * * *

11. Do you think your high school adequately prepared you: (Check one)

____ (1) To accept a job
____ (2) Continue your education
____ (3) Both
____ (4) Neither

12. Did you have a part-time job during school? (Check one) Yes (1) ____
No (2) ____

13. What importance do you give to career planning at this point in time?

____ (1) Not important
____ (2) Moderately important
____ (3) Very important

14. Do you have definite career plans? Yes (1) ____ No (2) ____ (If 'No,' STOP- DO NOT ANSWER 15, 16, 17)

15. If you answered yes to question 14, which group helped you most in your career plans? (Check one)

____ (1) Parents
____ (2) Friends
____ (3) Teacher(s)
____ (4) Counselor(s)
____ (5) Work experience
____ (6) Other activities
____ (7) School activities
____ (8) Other (specify) ______________

____

16. Have you received adequate career information on your chosen occupation?
Yes (1) ____ No (2) ____

17. If you answered yes to question 14, respond to the following: Read through the list of 27 activities and decide which of the following occupational clusters best approximates your present career plans. (Check only one)

____ 01. CARING FOR PEOPLE OR ANIMALS IN THEIR DAY-TO-DAY NEEDS, such as working in a nursing home, nursery, hospital, pet store, zoo, or animal laboratory.

____ 02. NURSING AND RELATED TECHNICAL WORK, such as registered nursing activities, X-ray technology, medical laboratory technology, or physical therapy.

____ 03. MEDICAL WORK, such as performed by a doctor, surgeon, dentist, or veterinarian.

____ 04. MUSICAL ACTIVITIES, such as singing, playing an instrument, or composing.

____ 05. ENTERTAINING PEOPLE by dancing or performing in stunt shows, comedy acts, or plays.

____ 06. ARTISTIC WORK, such as painting, sculpturing, flower arranging, photography, fashion designing, or interior decorating.

____ 07. WRITING novels, poetry, plays, or critical reviews for publication; or editing, translating, or writing speeches or technical reports.

____ 08. COMMUNICATIONS WORK, as in radio or TV announcing, journalism, news information reporting, or interviewing.

____ 09. PROMOTIONAL ACTIVITIES, as in publicity work, recruiting, or advertising.

____ 10. LEGAL WORK, such as performed by a judge or lawyer.

____ 11. NUMBER WORK, as in accounting, computer programming, finance, statistics, or mathematics.

____ 12. INSPECTING, as in sorting, measuring, and grading products; or checking equipment, meters, or public places.

____ 13. APPRAISAL AND EVALUATION, as in determining the efficiency of industrial plants and businesses, pricing real estate, surveying land, or conducting chemical or other laboratory tests.

____ 14. ENGINEERING AND OTHER TECHNICAL WORK, as in electronics, chemistry, physics, geology, architecture, or drafting.

____ 15. AGRICULTURE AND RELATED BIOLOGICAL WORK, such as farming, forestry, landscaping, or plant and animal research.

____ 16. CLERICAL WORK, such as filing, typing, key punching, stenography, or keeping records.

____ 17. MANUAL WORK such as performed by a construction laborer, farm hand, firefighter dishwasher, janitor, or furniture mover.

____ 18. MACHINE WORK, as in adjusting and operating machines used in the cutting or shaping of metal or cloth, driving tractor-trailer trucks, or operating heavy equipment.

____ 19. CRAFTMANSHIP, as found in the building trades, printing, watch repairing, welding, or tool and die making.

____ 20. SKILLED OPERATION, REPAIR, OR INSTALLATION OF PRECISION EQUIPMENT, such as performed by an airplane pilot, railroad engineer, television technician, computer operator, auto mechanic, or furnace, air conditioner, or appliance repairman.

____ 21. SERVING PERSONAL NEEDS OF PEOPLE, such as performed by a waiter, waitress, maid, usher, doorman, messenger, laundry man, gas station attendant, train conductor, policeman, fashion model, or stewardess.

____ 22. PROVIDING SKILLED SERVICE FOR PEOPLE as a restaurant or short order cook, beautician, barber, tailor, or dressmaker.

____ 23. TRAINING PEOPLE in skills, games, crafts, flying, driving, machine operation, or other activities; or training dogs, horses, or other animals.

____ 24. TEACHING, COUNSELING, AND SOCIAL WORK ACTIVITIES in schools, colleges, churches, clinics, or welfare agencies, including instruction in art, music, dance, and athletics.

____ 25. WAITING ON CUSTOMERS in stores, banks, motels, offices, or at home; helping telephone customers with business orders, reservations, and other information; guiding tours; transporting customers; or collecting tickets and tolls.

____ 26. SELLING AND MERCHANDISING WORK, such as performed by a department store buyer, insurance or real estate salesman, factory representative, or wholesaler or retailer of products or services.

____ 27. MANAGERIAL WORK, such as performed by a shop foreman, supervisor, school administrator, police or fire chief, head librarian, executive, hotel manager, union official, or owner or manager of a small store or business.

Do not sign your name.
Thank you for your cooperation.
Citizens Advisory Committee
Lake County Career Opportunities Study

LAKE COUNTY CAREER OPPORTUNITIES STUDY - 1974
(Grades 9, 10, 11)

A study is underway aimed at improving educational opportunities in this area. You can help, too, by answering each of the questions which apply to you. Please answer all questions as completely and accurately as possible. DO NOT SIGN YOUR NAME.

1. School (please print) ______________________________

2. Grade level (check one) 9 ____ 10 ____ 11 ____

3. Male (1) ____ Female (2) ____

4. Which of the following best describes your present or planned high school program of study? (Check one)

____ (1) Vocational
____ (2) College Preparatory
____ (3) Industrial Arts
____ (4) Commercial or Business (other than C.O.E., I.B.O.E.)
____ (5) Home Economics
____ (6) General
____ (7) Other (write in) ______________________

5. What do you plan to do on a full-time basis the first year after high school graduation? (check one)

____ (1) Apprenticeship program to learn a trade
____ (2) On-the-job training with a company
____ (3) Enter military service
____ (4) Become a full-time housewife
____ (5) Attend adult education classes
____ (6) Work full-time
____ (7) Attend a four-year college
____ (8) Attend a two-year community or junior college
____ (9) Attend a technical or business school
____ (10) Don't know
____ (11) Other (write in) ______________________

____

____

6. Why are you following the program you have indicated?

____ (1) This program seemed to fit my future goals.
____ (2) My parents decided for me.
____ (3) A counselor advised me to take this program.
____ (4) A teacher advised me to take this program.
____ (5) My friends were taking this program.
____ (6) This program seemed easy.
____ (7) A part-time job.
____ (8) Other (write in) ______________________

____

7. What importance do you give to career planning at this point in time?

____ (1) Not important
____ (2) Moderately important
____ (3) Very important

8. Did you have a part-time job? (Check one) Yes (1)______
No (2)______

DIRECTIONS FOR QUESTIONS 9-13

How would you rate the following high school services, experiences, or facilities? (Opposite each item check either "excellent," "satisfactory," or "poor.")

	excellent	satisfactory	poor
9. Counseling or guidance on post high school education	___(1)	___(2)	___(3)
10. Counseling or guidance on career choice	___(1)	___(2)	___(3)
11. Library materials & information on careers	___(1)	___(2)	___(3)
12. Courses offered	___(1)	___(2)	___(3)
13. Preparation for what I plan to do after graduation	___(1)	___(2)	___(3)

* * * * * * * * * * * * * * *

14. Do you have definite career plans? Yes (1) ____ No (2) ____(If 'No,' STOP-DO NOT ANSWER 15, 16, 17)

15. If you answered yes to question 14, which group helped you most in your career plans? (Check one)

____ (1) Parents
____ (2) Friends
____ (3) Teacher(s)
____ (4) Counselor(s)
____ (5) Work experience
____ (6) Other activities
____ (7) School activities
____ (8) Other (specify) ______________

____

16. Have you received adequate career information on your chosen occupation? Yes (1) ____ No (2) ____

17. If you answered yes to question 14, respond to the following: Read through the list of 27 activities and decide which of the following occupational clusters best approximates your present career plans. (Check only one)

____ 01. CARING FOR PEOPLE OR ANIMALS IN THEIR DAY-TO-DAY NEEDS, such as working in a nursing home, nursery, hospital, pet store, zoo, or animal laboratory.

____ 02. NURSING AND RELATED TECHNICAL WORK, such as registered nursing activities, X-ray technology, medical laboratory technology, or physical therapy.

____ 03. MEDICAL WORK, such as performed by a doctor, surgeon, dentist, or veterinarian.

____ 04. MUSICAL ACTIVITIES, such as singing, playing an instrument, or composing.

____ 05. ENTERTAINING PEOPLE by dancing or performing in stunt shows, comedy acts, or plays.

____ 06. ARTISTIC WORK, such as painting, sculpturing, flower arranging, photography, fashion designing, or interior decorating.

____ 07. WRITING novels, poetry, plays, or critical reviews for publication; or editing, translating, or writing speeches or technical reports.

____ 08. COMMUNICATIONS WORK, as in radio or TV announcing, journalism, news information reporting, or interviewing.

____ 09. PROMOTIONAL ACTIVITIES, as in publicity work, recruiting, or advertising.

____ 10. LEGAL WORK, such as performed by a judge or lawyer.

____ 11. NUMBER WORK, as in accounting, computer programming, finance, statistics, or mathematics.

____ 12. INSPECTING, as in sorting, measuring, and grading products; or checking equipment, meters, or public places.

____ 13. APPRAISAL AND EVALUATION, as in determining the efficiency of industrial plants and businesses, pricing real estate, surveying land, or conducting chemical or other laboratory tests.

____ 14. ENGINEERING AND OTHER TECHNICAL WORK, as in electronics, chemistry, physics, geology, architecture, or drafting.

____ 15. AGRICULTURE AND RELATED BIOLOGICAL WORK, such as farming, forestry, landscaping, or plant and animal research.

____ 16. CLERICAL WORK, such as filing, typing, key punching, stenography, or keeping records.

____ 17. MANUAL WORK, such as performed by a construction laborer, farm hand, firefighter, dishwasher, janitor, or furniture mover.

____ 18. MACHINE WORK as in adjusting and operating machines used in the cutting or shaping of metal or cloth, driving tractor-trailer trucks, or operating heavy equipment.

____ 19. CRAFTMANSHIP, as found in the building trades, printing, watch repairing, welding, or tool and die making.

____ 20. SKILLED OPERATION, REPAIR, OR INSTALLATION OF PRECISION EQUIPMENT, such as performed by an airplane pilot, railroad engineer, television technician, computer operator, auto mechanic, or furnace, air conditioner, or appliance repairman.

✓ ____ 21. SERVING PERSONAL NEEDS OF PEOPLE, such as performed by a waiter, waitress, maid, usher, doorman, messenger, laundry man, gas station attendant, train conductor, policeman, fashion model, or stewardess.

____ 22. PROVIDING SKILLED SERVICE FOR PEOPLE as a restaurant or short order cook, beautician, barber, tailor, or dressmaker.

____ 23. TRAINING PEOPLE in skills, games, crafts, flying, driving, machine operation, or other activities; or training dogs, horses, or other animals.

____ 24. TEACHING, COUNSELING, AND SOCIAL WORK ACTIVITIES in schools, colleges, churches, clinics, or welfare agencies, including instruction in art, music, dance, and athletics.

____ 25. WAITING ON CUSTOMERS in stores, banks, motels, offices, or at home; helping telephone customers with business orders, reservations, and other information; guiding tours; transporting customers; or collecting tickets and tolls.

____ 26. SELLING AND MERCHANDISING WORK, such as performed by a department store buyer, insurance or real estate salesman, factory representative, or wholesaler or retailer of products or services.

____ 27. MANAGERIAL WORK, such as performed by a shop foreman, supervisor, school administrator, police or fire chief, head librarian, executive, hotel manager, union official, or owner or manager of a small store or business.

Do not sign your name.
Thank you for your cooperation.
Citizens Advisory Committee
Lake County Career Opportunities Study

BUSINESS ADMINISTRATION

150	Accounting
151	Bank Management
152	Hotel/Motel Management
153	Purchasing
154	Farm Management
155	Business Management

SALES AND MARKETING

201	Advertising
202	Insurance
203	Marketing
204	Public Relations
205	Real Estate
206	Salesmen/Mfr's Rep.
207	Sales Clerk

MANUFACTURING

251	Assembly worker
252	Machinist
253	Tool & Die Maker
254	Welder

BUILDING TRADES

301	Construction
302	Carpentry
303	Electrician
304	Plumbing
305	Heavy Equipment Opr.

ENGINEERING, MATH & SCIENCES

351	Architecture
352	Astronomy
353	Biology/Bio Chemistry
354	Chemical Engineer/Chemistry
355	Civil Engineer
356	Drafting/Mechanical Drwg.
357	Ecology/Environmental Sciences
358	Electrical Engineering
359	Geology
360	Industrial Engineering
361	Mathematics
362	Metallurgy
363	Naturalist/Botanist
364	Physics
365	Zoology
366	Astronautics/Space Sciences

MECHANICAL REPAIR & SERVICE

401	Air Cond/Refrigeration
402	Aircraft Mechanic
403	Auto Repair & Service
404	Business Machine Repair
405	Computer Service
406	T.V. & Appliance Repair
407	Telephone Repair/Installation

PUBLIC SERVICE

450	Barber/Hair Stylist/Cosmetology
451	Coaching
452	Firemen/Rescue
453	Government/Diplomatic Service
454	Law Enforcement/Police
455	Lawyer/Judicial
456	Library Sciences/Librarian
457	Military Service
458	Recreation/Park Management
459	School Counselor
460	Special Education/Rehabilitation
461	Airline Pilot
462	Airline Hostess
463	Teaching

FOOD SERVICE

601	Home Economist/Homemaking
602	Chef/Cook
603	Dietician
604	Restaurant Manager
605	Waiter/Waitress

COMMUNICATIONS & THE ARTS

651	Art/Paint/Clay/Stone, etc.
652	Commercial Artist
653	Film making/Motion Pictures
654	Graphic Arts
655	Journalist
656	Music - Instrumental
657	Newspaper/Magazine Industry
658	Photography
659	Printing
660	Theatre/Dramatic Arts
661	TV-Radio Broadcasting
662	Writer
663	Music - Vocal

HORTICULTURE

701	Agriculture
702	Botanist
703	Forestry
704	Florist
705	Conservationist
706	Landscaping/Landscape Architect
707	Nurseryman

HEALTH

751	Dentist/Dential Technician
752	Doctor/Physician's Asst.
753	Medical Lab Technician
754	Nursing Careers/L.P.N./R.N.
755	Optometrist/Optician
756	Pharmacist/Pharmaceuticals
757	Psychologist/Psychiatrist
758	Therapist/Physical, Mental, etc.
759	Veterinarian
760	X-Ray Technician

SOCIAL SERVICE

851	Clergy/Pastor/Priest
852	Missionary/Medical, Religious
853	Social Worker
854	Youth Worker

CLERICAL - SECRETARIAL

801	Bank Teller
802	Bookkeeping
803	Computer Operation
804	Legal Secretary/Court Reporting
805	Secretary/Stenographer

RECREATION, LEISURE INTERESTS

01	African Culture & Dance
02	Archery
03	Art
04	Auto Customizing & Restoration
05	Auto Sports/Racing/Rallye
06	Baseball
07	Basketball
08	Bicycling
09	Billiards
10	Boating/Power, Sail
11	Bowling
12	Camping/Hiking/Mountaineering
13	Canoeing
14	Crafts
15	Debate/Public Speaking
16	Flying/Aircraft
17	Football
18	Golf
19	Guns/Marksmanship/Hunting
20	Indian Dancing/Indian Lore
21	Modelmaking/Auto, Airplane, Railroad
22	Motorcycling
23	Music
24	Ping Pong
25	Scuba Diving
26	Snow Skiing
27	Spelunking
28	Square Dancing
29	Hockey
30	Horsemanship
31	Stamp/Coin Collecting
32	Swimming & Diving
33	Tennis
34	Theatre
35	Track & Field
36	Water Skiing
37	Wrestling

CAREER AND HOBBY INTEREST SURVEY

INSTRUCTIONS: Read over the ENTIRE list of careers and check those which interest you. Review the career areas you have checked and pick the three which interest you MOST. Write the code numbers for the three careers you have chosen in the boxes marked for first, second and third choices under CAREERS. Do the same for recreation and leisure interests. Read the entire list, marking all the areas which interest you. Then select the three which interest you most and write their codes in the appropriate boxes.

NAME - LAST & FIRST

CAREER INTERESTS

1st 2nd 3rd

ADDRESS - NUMBER & STREET

LEISURE INTERESTS

1st 2nd 3rd

CITY

HOME PHONE NUMBER

ZIP CODE

CURRENT GRADE

SCHOOL

LAKE COUNTY CAREER OPPORTUNITIES STUDY - 1974

Directions: Please direct to the adult education (continuing education) coordinator or person(s) responsible for non-credit course offerings at your school.

Name of person completing the questionnaire - Title:

____

School:

____

_____ We are returning the questionnaire because we do not offer non-credit courses.

1. What adult education (continuing education) courses have you offered over the last three academic years? (1971-72, 1973-74). PLEASE LIST THE TITLES OR ATTACH ANY BROCHURES, SCHEDULES OR OTHER MATERIALS WHICH EXPLAIN YOUR OFFERINGS.

2. Based on the material in Question No. 1, CIRCLE those courses which were successful.

3. Did any of the adult education courses offered fall in the following categories?

	YES	NO
a. Planning (e.g., land use, community, transportation/government, etc.)	____	____
b. Family Education (Non-consumer)	____	____
c. Consumer Education	____	____
d. Drug-Alcohol Education	____	____
e. Improving the Individual (e.g., personality development, creative thinking, etc.)	____	____

4. Have you had specific topics that have been requested which you have been unable to satisfy? What are they?

TOPIC	REASON FOR NOT OFFERING
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

5. What suggestions do you have for non-credit activities and programs? (e.g., How to Run for Public Office, Metrics, Maintenance Seminar, Advertising for Small Business, etc.)

A.

B.

C.

D.

E.

F.

G.

LAKE COUNTY CAREER OPPORTUNITIES STUDY - 1974
HIGH SCHOOL COUNSELORS' QUESTIONNAIRE

1. Are you a vocational counselor________ or a non-vocational counselor__________?

2. Are you a full-time________or a part-time_________counselor?

3. The grade level of your students is primarily 9_____10_____11_______12_______?

4. How many clock hours of your time per week is spent in advising students about careers, career opportunities, and job placement?

   1. 0-5 (hours) ________ 2. 6-10 (hours)_______

   3. 11-15 (hours) ________ 4. 16 (hours) and over_________

5. What are the principle vehicles used in your school to determine student career potential and interest?

Usage of Vehicle

Heavy Usage (Nearly all of my students receive it)	Frequently Used (Over half of my students receive it)	Rarely Used (Under half of my students receive it)	Never Used	Type of Vehicle (Place one check (✓) for each type)
				A. Tests of interest
				B. Tests of general intelligence
				C. Aptitude and ability tests
				D. Achievement tests
				E. Personality tests
				F. Personal interviews
				G. Other (please list)

____

____

____

6. Who receives the information about student career interest and aptitude? (Check one)
   1. ________ Students only
   2. ________ Students and parents
   3. ________ Students, parents upon request
   4. ________ Parents only

7. How is this information on career interest and aptitude delivered?
   1. ________ Orally to the student
   2. ________ Orally to the parent
   3. ________ Orally to both
   4. ________ Printed material to take home
   5. ________ Printed material sent home

8. What career-related (instructional or guidance) programs, not now available, would you like to have added to your school's curriculum?
   1. ______________________________
   2. ______________________________
   3. ______________________________
   4. ______________________________
   5. ______________________________

9. Do most of your assigned students seem to express a readiness for career guidance and career information?

   Yes__________ No__________

10. Does your school have any career information or career exploratory programs for the student who is both non-vocational and non-college bound?

    Yes__________ No__________

    If yes, please explain. ______________________________

    ____

    ____

11. Would you like to see cooperation by business and industry in the area of career information and exploration.

Yes	No	
____	____	Field trips
____	____	Guest speakers
____	____	Career days
____	____	Group meetings with counselors
____	____	Group meetings with teachers
____	____	Co-op programs
____	____	Other (explain) ______________________________

____

____

Do not sign your name.
Thank you for your cooperation
Citizens Advisory Committee
Lake County Career Opportunities Study

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